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COASTAL ZONE MANAGEMENT

HEARING

BEFORE THE

NATIONAL OCEAN POLICY STUDY

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

ON

COASTAL ZONE MANAGEMENT

AUGUST 3, 1989

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CONTENTS

	Page
Opening statement by Senator Kerry	1
Opening statement by Senator Stevens	3
Opening statement by the Chairman	4

LIST OF WITNESSES

Beam, Dr. Wayne, director, South Carolina Coastal Council	65
Prepared statement	68
Carbonell, Armando J., executive dirctor, Cape Cod Planning and Economic Development Commission	69
Danson, Ted, president, American Oceans Campaign; accompanied by Robert Sulnick, executive director; and Andrew Palmer	6
Prepared statement	9
Hanmer, Rebecca W., Acting Assistant Administrator for Water, Office of Water, EPA	23
Prepared statement	27
Maginnis, Thomas J., Assistant Administrator, National Ocean Service, NOAA	33
Prepared statement	37
Taylor, Dr. Sarah, executive director, Chesapeake Bay Critical Area Commission	55
Prepared statement	59

COASTAL ZONE MANAGEMENT

THURSDAY, AUGUST 3, 1989

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
NATIONAL OCEAN POLICY STUDY,
Washington, DC.

The committee met, pursuant to notice, at 9:35 a.m., in room SR-253, Russell Senate Office Building, Hon. John F. Kerry (vice chairman of the subcommittee) presiding.

Staff members assigned to this hearing: Mike Nussman, professional staff member; Bob Eisenbud, and Earl Comstock, minority professional staff members.

OPENING STATEMENT BY SENATOR KERRY

Senator KERRY. This hearing will come to order.

We are meeting today to continue a discussion regarding the Coastal Zone Management Act and to learn from a number of different witnesses what it is that we can do in order to better implement this act to make it work at a time when clearly the demand for coastal zone management is increasing significantly.

Timing is sometimes everything in politics. I do not know who would want to applaud this particular timing. I do not. But nevertheless, it helps to serve to underscore our meeting here today and there is a bitter irony in it, because it involves Massachusetts.

Yesterday's newspapers in Massachusetts carried the headline, "Contamination Forces State to Close Shellfish Beds in all 15 Cape Towns" and 5,600 acres of Shellfish Beds spanning all 15 towns of Cape Cod in Massachusetts.

The State Environmental Affairs Office said it shut them down because the heavy summer rains have caused road runoff, with carbon and grease into creeks and salt marshes. Other factors forcing the shutdown are faulty septic systems, discharge from holding tanks and development, which has been the main culprit, with the number of areas closed arising dramatically on the heels of the Cape's building boom.

In addition to that, a headline in the "New York Times" on August 1st reads: "As beach erosion accelerates, remedies are costly and few." Ten years ago we did not have good data on erosion rates. Now we do, and we know about 90 percent of the coast is eroding.

Well, if ever there was a time when coastal zone management has to integrate with land use practices, this is it. In June of this year I introduced the Coastal Zone Improvement Act which

strengthens the Coastal Zone Management Act, and I hope to hear comments and suggestions this morning from our distinguished witnesses on that bill.

I also look forward to testimony from some of the practitioners, who will share with us their innovative and model coastal programs and offer us creative ideas that relate to the Coastal Zone Management Act and to its ability to address coastal pollution.

We are obviously curious to hear how we can integrate and promote those models to carry out our responsibilities, particularly as we recognize that our wetlands are being destroyed and that wetland destruction will continue with increased global warming as well as increased subsidence, which is the lowering of the earth's surface itself and increasing the sea level rise.

Last week, I joined in a round table discussion with 17 senators, congressmen and governors from coastal states in which we discussed the myriad of coastal issues. At that meeting, we signed a coastal covenant designed to protect and preserve our coastal resources.

The reason for that action is really very simple. Our oceans, our coastal waters, our estuaries and our wetlands have come under extreme attack from a combination of human-induced activities, such as the failed waste disposal that I referred to in the closing of the Massachusetts clam beds, the failure of land development to have policies that will prevent destruction, the urban and agricultural storm water runoff from roads, pesticide runoff, the dumping of toxic medical wastes, nutrient overloading from acid rain and from other sources which steals the oxygen and creates algae bloom and kill off of life, and finally the sea level rise from the two sources that I mentioned.

Now, over the past 20 years we have developed certain policies in an effort to try to respond to this, and we have been particularly sensitive to point source solution. We have been equally insensitive, or incapable of dealing with nonpoint source pollution, and it is important that we discuss this morning how we can improve the ability of the Coastal Zone Management Act to take into account those needs.

I might also add that we must discuss very intensely the notion of increasing the integration of land management techniques into the Coastal Zone Management Act.

I was reading some background materials on coastal zone management in preparation for the legislation which we submitted, and I was struck by the 1969 Stratton Commission's rationale for why the Coastal Zone Management Act itself was created in the first place.

Let me just read one small paragraph. "Effective management to date has been thwarted by a variety of government jurisdictions involved," i.e. turf battles, "low priority afforded marine matters by state governments, the diffusion of responsibilities among state agencies and the failure of state agencies to develop long-range plans."

That was 1969, and that was the rationale for creating the Coastal Zone Management Act. Tragically, those same words in different ways are applicable today as we meet in 1989, when we are faced with a much more significant onslaught of this particular problem.

Massachusetts is going to lose $71 million to the state shellfish industry as a result of the closure of shellfish beds. In addition to that, we have seen over 60,000 acres of shellfish growing waters that did not meet the water quality standards in this past year.

So I will not go on further, because we want to hear from our witnesses. But I think it is clear to all of us as we meet here this morning that we have to find a way to get over the rhetoric and the realizations that we have personally about this problem, and seek to enforce and strengthen the existing mechanisms in order to guarantee that there will be something left for the future to share.

I grew up in those waters and enjoyed Sunday afternoons of clamming with my father. I am looking forward to leaving here hopefully tomorrow, maybe Saturday at the latest, to be able to share that same experience with my children.

I know that our first witness today came to his activities by virtue of his arriving at a beach with his children and seeing signs that said, "You cannot eat the fish," and "You are not allowed to fish here," and "You cannot swim here."

Maybe, as more and more Americans develop a depth of frustration and anger at this rampant, brazen destruction of resources that cannot be replaced, we will summon up the political will and the desire to do something about it in order to save it.

Senator Stevens?

OPENING STATEMENT BY SENATOR STEVENS

Senator STEVENS. Mr. Chairman, the Senate will take up the oil spill legislation at 11:00 and I must leave in about a half an hour to go prepare for that, but as one who worked with the full Committee Chairman, Senator Hollings, on the Coastal Zone Management Act many years ago, in hindsight, I would say the greatest mistake we made at the time was not coordinating more closely with the environmental organizations and with the Environment and Public Works Committee here to put together the two concepts of land use and environmental quality.

I was briefed yesterday on the cleanup of some of the national priority sites in my state that are contaminated areas—former landfills, areas that provide substantial contamination to our waters and runoff.

I was told that in order to clear through the various agencies, Federal and state, to get permission to start the cleanup, it would take four years. It will take three years after that to remove these contaminants from the soil and in that period of time, of course, there is going to be substantial runoff and continued contamination of our waters.

We have a very small population base and therefore our problems are not that great in the national perspective, but I shudder to think about some of the problems that exist along the coastline of what we call the south 48, if it takes this long to get to the contaminants and get them removed.

I think the Coastal Zone Management Act's problem really is with turf battles between the people that control the uplands and have the control mechanisms for reviewing plans and assuring coordination between county and state and Federal agencies, and

really, as you said, trying to arbitrate turf battles over who is going to be finally in charge of whatever project it is and who is going to get to spend the money that ultimately comes from the Federal taxpayer to clean up these areas. Those turf battles are delaying the actions that are necessary to protect our oceans.

Ultimately, the runoff from the area that I spoke of, two of them are in the Fairbanks area, ultimately they reach the oceans, and ultimately they contaminate the fresh waters of our state all the way down to the sea.

I am concerned greatly over this lack of coordination between all elements of government in trying to assure a commitment to the earliest possible removal of these contaminants from our soil and also to prevent further contamination. The unfortunate part of it is, these areas continue to be used today, until we can get the authority to close them and mandate opening others.

I would hope that we would broaden the scope of our hearings and seek some joint hearings with the Environment and Public Works Committee to see if we cannot find a way to designate someone who will be in charge. It is almost like the oil spill situation. Someone has got to be in charge and if it takes a Federal act to say that in certain instances, when we go over a certain threshold of pollution, that Federal agents will be in charge and the Federal Government will take responsibility and ultimately those who were responsible for the contamination will have to pay part of the Federal taxpayers' charges, I favor that.

I think we are going to have to find some way to eliminate these turf battles and to make removal of contamination the first order of business and not the settlement of whose staff gets to spend the money that we provide.

I thank you for holding the hearings. I wish I could stay with you all the way through them. I have tried to see what we can do to protect this act, but now I think we need to expand it and we need to particularly make certain that we have a better understanding of the relationships between the Federal environmental agencies, the state and the county and then those who are in charge of the removal of this contamination.

Thank you.

Senator KERRY. I thank the Senator from Alaska and note simultaneously he has indeed been a long-time advocate and champion of this effort, a lot longer than I have been here, obviously, he has been here working on it and I know Senator Hollings in 1976 or so strengthened this act. The consistency provisions have been under siege, but I thank the senator and look forward to working with him.

I have a statement that Senator Hollings would like to have included in the record.

[The statement follows:]

OPENING STATEMENT BY THE CHAIRMAN

Good morning. The full Committee and the National Ocean Policy Study (NOPS) have convened this oversight hearing on the Coastal Zone Management Act (CZMA). Though the CZMA does not require reauthorization until September 1990, threats to our coastal areas need our immediate attention. This hearing will address the role of the Act in protecting coastal resources, including water quality. We also will discuss how that role might be enhanced. Today's witnesses will focus on the programs

of local communities and state governments for dealing with growing coastal problems. More importantly, they will provide the federal government with directives for planning and future legislation.

In 1972, Congress enacted coastal zone management legislation to balance coastal development and preservation needs. Since then, the necessity to protect and manage nearshore waters has become equally as important. Coastal resources are threatened by our desire to be near the ocean. I must say that our affinity for the sea is not misguided; to the contrary, it is understandable. But coupled with this affinity, there must be the element of reason. We cannot continue to use our coastal resources as though they were indestructible. We can no longer overbuild. We can no longer pollute. Recent events demonstrate the deterioration of our coastal environment including the unexplained die-off of dolphins along the Atlantic coast, the pollution of our beaches by medical wastes, and the closure of shellfish beds in a number of states. Yet, it takes a catastrophe such as the EXXON VALDEZ oil spill to make the general public aware of how easily the natural balance in the coastal zone can be upset.

Responding to growing recognition of threats to coastal resources, a number of bills have been introduced to strengthen our protection programs. Some will be discussed today, including S. 1189, the "Coastal Zone Improvement Act of 1989." In addition, congressional leaders from the Senate and the House along with the governors of several states recently approved an agenda to work cooperatively in a joint coastal preservation effort.

I want to thank Senator Kerry for convening this hearing, and I call on my colleagues to join us in a thorough review of these complex issues.

Senator KERRY. Senator Robb?

Senator ROBB. Mr. Chairman, I have been interested in working on this for some period of time, wearing different hats. I look forward to working with you and others in this new capacity and I look forward to hearing from our witnesses.

Senator KERRY. Thank you very much.

We are delighted to welcome Ted Danson here this morning, speaking on behalf of the American Oceans Campaign. Mr. Danson is President of the American Oceans Campaign. He is extremely knowledgeable about our coasts and oceans, estuaries and bays and the problems that they face.

The other day when we met as a group—the governors, congressmen and senators from coastal states—and signed a covenant, the very first item was an agreement to create an environmental ethic. That means raising the consciousness level and the educational level of Americans regarding these issues.

That is something that Ted Danson has been doing for a considerable period of time, and I might add, it is only with the effort of people who have platforms and visibility and credibility and who are willing to take the time out of their personal lives in order to raise that consciousness and create that ethic that we are going to be successful. The political will of this country has to be galvanized around these issues.

Ted, we welcome you here today. We recognize your proficiency, obviously, as an actor. I understand you have been just nominated to receive an Emmy, which is a tribute to that, but it is a special side of you that we welcome here today, apart from those skills. We are particularly grateful to you for your commitment to this and for the expertise that you have developed, and we welcome your testimony here this morning.

STATEMENT OF TED DANSON, PRESIDENT, THE AMERICAN OCEANS CAMPAIGN; ACCOMPANIED BY ROBERT SULNICK, EXECUTIVE DIRECTOR; AND ANDREW PALMER

Mr. DANSON. Thank you very much. On behalf of the American Oceans Campaign I wish to express my thanks to the Chairman and members of the Committee for inviting us to testify on this very crucial issue of protecting our coasts and our coastal waters.

I would also like to thank you, Senator Kerry for inviting me to join you in looking at a model project for controlling storm water runoff in Massachusetts. I know we would both prefer to be digging clams with our children, but if we cannot, that is probably the next best thing to do.

For the past week I have been in Los Angeles, Chicago, Boston, Long Island Sound and many coastal towns in New Jersey. All the people I have talked to, from the owner of a seafood restaurant in Boston to the Sound-keeper of Connecticut, to people who just care about their oceans, all of them are angry, frustrated—very frustrated—about what is happening to our coastal waters, and here is what is making them angry:

Sixteen trillion gallons of waste are dumped into our coastal waters from industrial plants, sewage treatment plants, every years. Billions of pounds of agricultural chemicals, nutrients, pathogens, hydrocarbons end up in our coastal waters from surface runoff. Air pollution infuses our waters with chemicals that cause destruction of habitat and fishery resources.

What we are doing as a society is turning our bays, our estuaries, and our coastal waters into one large chemistry experiment. We know what some of these chemicals are doing, but other chemicals—hundreds of them, thousands of them—we can only guess at what they are doing to the irreplaceable marine habitat.

We do know that some chemicals which act as nutrients can cause widespread destruction of marine life by reducing the levels of oxygen in the water so that nothing can live. Large areas off Long Island Sound, thousands of square acres in the Gulf of Mexico, square miles have been observed in recent years to have low oxygen levels where nothing lives.

Toxic chemicals, including pesticides, heavy metals and other industrial pollutants have been documented to cause horrifying effects on sea life. Cancerous growths have been found on the fish from Baltimore Harbor to Puget Sound.

In the Great Lakes area nursing mothers, pregnant women, women who wish to someday be pregnant, children under the age of 15, are warned against consuming a wide variety of fish caught locally. When I wrote this, it was nearly 40 percent of all shellfish producing waters that were closed or under harvesting restrictions because of health restrictions. That has gone up.

As if this were not enough, our coasts are facing another threat: the physical destruction of important habitat from development. The mangroves, coral reefs and wetlands that are destroyed by development are the nurseries and fishing ground for much of marine life.

Within a few years, 75 percent of us who live within 50 miles of a coast, not only will we lose marine habitats, but more pollution

from runoff will destroy water quality of once pristine areas. At that point, household pesticides, weed killers and lawn fertilizers become a sizeable source of pollution.

Our impact on marine life is not limited just to coastal waters. Two summers ago, major die-off of Atlantic dolphins occurred. This year, 17,500 seals have died in the North and Baltic Seas. The cause is being debated, but it is safe to say that man-made causes are at fault.

Overfishing is another problem. Fish account for 40 percent of the animal protein for 2 billion people in the developing world, 24 percent for the world as a whole. Every night, more than 700 fishing boats with 20-mile-long drift nets sweep an area in the northern Pacific the size of Ohio—every night. They may just be fishing for squid, but everything they come into contact with, they kill, and with that kind of misuse our ocean cannot sustain us for long.

I will not dwell on the tragedy of the Exxon Valdez spill which desecrated one of our most pristine environments, but large or small, routine or catastrophic, oil and other chemicals are pouring into our coastal waters in ever-increasing amounts.

Plastics take a heavy toll on marine life. Each year, 30,000 northern fur seals die tangled in plastic bags and lost fishing nets. Every day, a half a million plastic containers—every day—are dumped into the ocean by ships and miles of nets are set adrift.

The list goes on and on, but basically, what we do on land is having a devastating effect on our oceans and our marine life. As I said earlier, people are angry and they are frustrated, but they all are ready to support and assist whatever actions are necessary to reverse the tide of destruction and this is why I am so happy to see this Congress take a leadership role in coastal protection. The people are ready.

We would like to congratulate Senator Kerry for his authorship of S.1189, which provides an excellent platform for improving the Coastal Zone Management Act. The Nation's premier law on management and preservation of our coast has served well, but now is the time we must strengthen it to meet the challenges of the 1990s and beyond.

I will not pretend to be an expert on the particulars of this legislation, but I would, however, like to make a few observations which I hope will guide this Committee and others into developing and ultimately enacting new, progressive legislation.

The single largest cause of new sources of toxic pollution and habitat loss results from the crush of development. We are not a totalitarian society. We cannot tell people where they can and cannot live.

It is therefore imperative that as the historic shift of the population moves into the coastal zone that we take all necessary steps to preserve, protect and restore critical land and water habitat. S.1189 makes a strong connection between water quality and coastal development.

We urge the Committee to look carefully at ways in which we can gain state cooperation in protecting areas of the coast which are currently lightly developed and provide the necessary habitat for the long-term survival of fish and water fowl.

The bill, S.1189, rightly restores fully the Federal consistency provision of the CZMA which existed prior to the Supreme Court decision of 1984. The American Oceans Campaign is also aware that this Committee has fought for and is committed to essentially funding state coastal programs.

We also understand that the crucial need to reduce the Federal budget deficit is primary in everybody's mind today, but if we lose the battle to maintain fishable and swimmable waters, then the financial damage to the U.S. economy will also be substantial.

Twelve billion dollars for fisheries, combined with billions of dollars from coastal recreation activities are all at risk. Already, regions of the eastern seaboard have experienced major financial losses due to beach closing and coastal pollution.

Yet the amount of money appropriated by Congress for coastal programs cannot be characterized as pocket change alongside the totality of the Federal budget. In fact, the money spent for a single B-2 bomber could fund coastal programs at the present level for the next 18 years.

This country has been the greatest center of wealth the world has ever seen. Opinion polls over the last few years have consistently shown that the public is ready to do whatever it takes to clean up the environment. They are willing to pay for it.

Surely we can ante up on the amount of money we spend to take care of such a magnificent resource as our oceans. We strongly urge the Committee to take a close look at this issue and create and find new ways of financing coastal programs above and beyond today's level.

Once again, I just want to emphasize the people are ready for this.

Thank you very much for having us here. That concludes my testimony.

[The statement follows:]

TESTIMONY OF
TED DANSON, PRESIDENT

THE AMERICAN OCEANS CAMPAIGN

Before the

Senate Committee on Commerce, Science, and Transportation

On behalf of the American Oceans Campaign, I wish to express my thanks to the chairman and members of the committee for inviting us to testify on the very crucial issue of protecting our coasts and coastal waters.

Until a few years ago, I was one of the many who thought of the ocean as a vast, vital ecosystem that no amount of man's activities could threaten. Then I was stunned into a different reality when one day I had taken my two daughters to the beach near our home in Santa Monica, only to discover signs telling me it was dangerous to our health to swim or eat fish from these waters.

Santa Monica is not an enclosed bay like the Chesapeake, but an indentation in the Southern California coastline, open to the ocean waves and currents. I was astounded to find that human activity could actually poison such waters. I wanted to know how this could happen and so I began to talk to knowledgeable people.

What I quickly found out is that the nightmare of Santa Monica Bay was being repeated -- in different ways with different effects -- along virtually every mile of our coastline, including our Great Lakes. In one government study by the Office of Technology Assessment, entitled Wastes in the Marine Environment, I read that we annually discharge 16 trillion gallons of wastes into our rivers and coastal waters from industrial outfalls and municipal sewage treatment plants.

I found out that billions of pounds of agricultural chemicals, nutrients, pathogens, and hydrocarbons enter our coastal water annually from surface runoff -- the nonpoint sources of contamination. I learned that even air pollution can contribute significantly to the decline of our nation's coastal waters and cause destruction of habitat and fishery resources.

Mr. Chairman and members of the committee, what we as a society are doing is turning our bays, estuaries, and coastal waters into one large chemistry experiment. For

some of the chemical inputs, we have a reasonably good understanding of the effects. For thousands of other chemicals, we can only guess at what they are doing to irreplaceable marine ecosystems.

We do know that chemicals which act as nutrients can cause widespread destruction of marine life. They reduce life-sustaining levels of oxygen so low that nothing can long survive. Long Island Sound has experienced large areas of waters containing inadequate levels of oxygen in recent years. Scientists have documented large areas in the Gulf of Mexico covering thousands of square miles with such low amounts of dissolved oxygen, that nothing is thought to be able to live there.

Toxic chemicals, including pesticides, heavy metals, and other industrial pollutants have been documented in many studies to cause horrifying physical impacts on sea life. Cancerous growths on fish caused by PCBs, hydrocarbons, and other chemicals have been found from Baltimore Harbor to Puget Sound. In the bay with which I am most familiar -- Santa Monica -- biologists have measured dangerous levels of DDT greatly exceeding EPA's criteria for what is considered safe for humans to ingest. This is happening despite a decades-long ban on the use of the chemical in agriculture.

This contamination is not just a problem for the fish. Consumption of some species of seafood has become a hazard to human health in a number of regions of the country. In some of the Great Lakes, health officials are warning nursing mothers, pregnant women, women who expect to bear children, and children under the age of 15 against consuming fish caught locally. In 1985, nearly 40% of commercial shellfish producing waters nationwide were either closed or under harvesting restrictions because of health concerns.

And as if all this weren't enough, our coasts face another threat -- the physical destruction of important habitat caused by irresponsible and unwise shoreline development. Demographic studies show that we, as a nation, are moving to the coasts. Between 1950 and 1984, the population of coastal counties grew by more than 80%. Within a few short years, it is estimated that 75% of the entire population of the U.S. will live within 50 miles of a coastline, including the Great Lakes.

As more people crowd to the coasts, more wetlands are filled, more habitat is lost, and more pollution from runoff destroys water quality of once pristine areas. Failed septic systems, household pesticides, weed killers and lawn fertilizers can become cumulatively significant

pollution sources in even medium density developments.

If we fail to control and guide the present land-rush to the sea then we stand to lose the last remaining contiguous areas of unspoiled coastal habitat, essential for maintaining the vitality of our coastal biological communities. Whether we change our policies toward coastal development or not will determine whether our children will inherit a nation with a "highly developed seacoast with small museums of protected marsh," as one leading marine scientist put it.

Unfortunately our impact on the marine environment may not be confined to just near coastal waters. Evidence suggests that we may also be upsetting the balance of the marine ecosystems of the deeper ocean waters. Two summers ago, the U.S. suffered a major die-off of Atlantic dolphin involving thousands of individuals. In what we as a nation should take as a warning for the future for our own waters, 17,500 seals have died in the North and Baltic Seas in the past year. While the exact cause of these deaths is hotly debated, there are strong reasons to suspect that man-induced effects may be playing an important role. There is no debate, however, that the degradation of these animals' critical habitat will impair the eventual recovery of their populations.

Finally, we can't ignore the periodic catastrophic events humankind visits upon the coastal waters. The tragedy of the Exxon Valdez disaster has shown us the ability of one single vessel to cause heretofore unimaginable damage to the living resources of one of our most pristine and productive ecosystems. The other recent spills off Rhode Island, in the Delaware River and in Galveston Bay have served to underscore that these events are not just isolated incidents. Large or small, routine or catastrophic, oil and others chemicals are finding their way into our marine waters in ever increasing amounts.

I wish I didn't have to come before you with such a lengthy litany of bad news, but the fact is, the state of our coastal ecosystems is imperiled as never before in our history. But I do have something on a hopeful note to bring to your attention. I am firmly convinced that the citizens of this country stand ready to support whatever actions are necessary to reverse the tide of decline. I also believe that this support goes deep and wide across the country.

This week, I am in the midst of filming a program with the National Audubon Society on our coastal crisis. I have spent the last four days meeting and speaking

with local government officials, fishermen and ordinary citizens who are trying to cope with what is happening to their coastal waters. From the seafood restaurant owner in Boston, to the "Sound Keeper" of Connecticut, to the citizens of the coastal communities of New Jersey, people are attempting to save our coasts with their own tools at hand. In my view we are seeing an emergence of a whole new class of national heroes.

The American Oceans Campaign is convinced that there are many things an informed and empowered citizenry can do to make a difference. The AOC is launching a public information campaign to inform residents of coastal areas and watersheds what steps they can take in their own lives to cut down on the toxic waste stream pouring into our rivers and bays. Citizens can also work with local and state governments to improve regulation of development and waste discharges. But we must also recognize the limitations of the legal authorities and the monetary resources to tackle many of the problems besetting our coasts at the state and local level. Citizen volunteers can organize to show what needs to be done, but government is still our best avenue through which action can be taken.

An essential ingredient in the effort to restore, preserve and protect our invaluable marine resources is federal leadership. In 1972 Congress and the Administration worked to create the Coastal Zone Management Act (CZMA). This law has since become one of the keystone pieces of coastal planning legislation. However, we have suffered a period of not so benign neglect for the past eight years. While it is early to make a complete judgment on the current administration, the indications so far are not encouraging. This Administration, taking its cue from the policy of the last eight years, continues to push for zero funding for state coastal management grants.

We are heartened to see that the needed national leadership may be coming from this Congress. The introduction of a number of innovative coastal bills by members of both houses is very welcome to us. Just a little over a week ago, members of Congress and the governors of eight states met in Washington to sign on to a coastal action plan. While these steps involve more symbolism than concrete solutions, we feel they are still important events to focus the country's political leaders on the urgency of moving ahead.

In particular, we would like to congratulate Senator Kerry for his authorship of S. 1189, which provides an excellent platform for improving the Coastal Zone

Management Act. The nation's premier law on the management and preservation of our coasts has served well, but now is the time we must strengthen it to meet the challenges of the 1990's and beyond. We are convinced that many of the provisions of the proposed bill will move the country much further along toward the goal of fishable and swimmable waters for all.

I will not pretend to be an expert witness on the particulars of this legislation. I understand that you will hear from other eminently qualified witnesses to take on that task. I would, however, like to make a few observations which I hope will guide this Committee and others in developing and, ultimately, enacting new progressive legislation.

1. We must provide leadership and incentives for states to adopt stronger land management policies.

The single largest cause of new sources of toxic pollution and habitat loss results from the crush of development. We are not a totalitarian society, regulating who lives where. Freedom to move to any spot within our country is a cherished right. It is therefore imperative that as the historic shift of the population moves into the coastal zone, that we take all necessary steps to preserve, protect and restore critical land and water habitat.

S. 1189 makes a strong connection between water quality and coastal development. This is completely appropriate and essential to meet the national goal of fishable and swimmable waters. We applaud this approach. But we would also urge the committee to look carefully at ways in which we can gain state cooperation in protecting areas of the coast which are now lightly developed. These lands provide the necessary contiguous habitat essential for the long-term survival of fish and waterfowl. As I indicated earlier, "little museums" of wetlands will not maintain the biological diversity and abundance that we all wish to see remain on our coasts.

2. We must act to restore fully the federal consistency provisions of the CZMA.

S. 1189 rightly restores fully the federal consistency provision of the CZMA which existed prior to the Supreme Court decision of 1984. The decision has been so broadly interpreted by the federal agencies that they attempt to exempt most agency actions which were formerly subject to consistency review.

Fairness and reason demand that the states regain their old authorities under the consistency provision. Fairness, because Congress made a compact with the states when the CZMA originally was enacted that they would have a substantive role in determining federal activities affecting their coastal zones. And reason, because it is only sensible that the Federal government cooperates fully with affected states across the board in carrying out those goals of coastal protection. In light of the fact that the proposed new legislation puts new responsiblities upon the states, it is imperative that Congress return to the states its full voice in the Federal/state partnership.

3. There is a need to find ways to increase the financial assistance available to implement the necessary new coastal intitiatives.

The AOC is aware that for the past eight years, many members of this committee have fought to provide state grant money for coastal programs. We also understand the crucial need to reduce the federal budget deficit. However, if we lose the battle to maintain fishable and swimmable waters along all our coasts, then the financial damage to the U.S. economy will also be substantial. Twelve billion dollars of national income from fisheries combined with billions of dollars more from coastal recreation activities are all at risk. Coastal communities along parts of the Eastern Seaboard have already experienced major financial losses due to beach closings and coastal pollution. Yet the amount of money appropriated by Congress for coastal programs can't even be characterized as "pocket change" alongside the totality of the Federal Budget. In fact, the money spent for a single B-2 bomber could fund coastal programs at the present level for the next eighteen years.

This country has been the greatest center of wealth the world has ever seen. Opinion polls over the last few years have consistently shown that the public is ready to spend what is necessary to clean up the environment. Surely we can up the ante on the amount of money we spend to take care of such a magnificent resource as our coasts. We strongly urge the committee to take a close look at this issue, be creative, and find new ways of financing coastal programs above and beyond today's level.

This concludes our testimony. We thank the Committee once again for soliciting our views.

Senator KERRY. Thank you very much, Mr. Danson. Let me open the questions by asking you what the strategy and goals of the American Oceans Campaign will be over the course of these next months with respect to this and other matters of ocean legislation. You are joined here by——

Mr. DANSON. Yes, Bob Sulnick, who is the Executive Director of the American Oceans Campaign and an environmental lawyer, and Andy Palmer, who works here on the Hill and is one of the best ocean—you do not like the word lobbyist here, do you?—executives around. Yes. That is American Oceans Campaign. You are looking at us.

I consider my job—they all have other jobs to do—is to create public opinion. I know that the industry in Hollywood, from the wives of all the executives and the executives and the heads of networks and the heads of studios, care a great deal and are now very upset and wanted to make a difference themselves, so the whole industry is going to start producing either PSAs or messages to inform the public how they can make a difference.

One of the biggest problems is just household toxics—and how we affect, by our disposable society, how we affect this problem.

Also—I do not know if this is nice to say either, but my impression is that Congress reacts and what you need to be able to get your job done is to have people assure you that this is exactly what they want, now. So we will also encourage people and show them how to be in contact with you and to support bills, for example this one, that are appropriate to handle these problems.

Senator KERRY. As you went out in the course of the last week—and this is not your first journey of this kind. You have been doing this for some time. How would you express people's awareness at this point in time, and what are they asking specifically for us to do?

Mr. DANSON. There are not that many people now who do not know what the problems are and are not aware. You cannot pick up a newspaper or magazine without seeing a headline regarding the environment. The biggest question is, what can I do? How can I make a difference?

So I am still not sure—what they want you to do is create legislation. They want you to create educating programs. They want you to spend money. I do not know that it is my job to come here and tell you that. I feel my job is to tell you that people care and want to know how they can make a difference. They want to know what they can do to stop this from happening.

Senator KERRY. What tradeoffs do you find people telling you they are willing to make in order to achieve the goals to clean up coastal waters?

Mr. DANSON. I think there was a Harris poll taken recently in which people said they are now willing to pay to clean up their environment. They may not want to, but they are willing to spend money, and, obviously, that is what it is going to take. So I think that is maybe the biggest difference. Yes, of course I do not want to lose our oceans, but the next step is yes, I am willing to pay now.

Senator KERRY. Have you talked with farmers and others who use pesticides and are involved in some of the policies that result in the runoff?

Mr. DANSON. I have not—no.

Senator KERRY. What about people's general willingness——

Mr. DANSON. I am sorry, but I mean, pesticides—I mean, the ocean is like a mirror to the state and the health of the planet. Everything that we do ends up in the ocean, so people's concern for pesticides and what they are eating affects the ocean, so everything is interrelated. I would say there is a great deal of concern about the use of pesticides in our country. I have not talked to farmers, though.

Senator KERRY. When you first started, I gather you got interested in this and went to a meeting in Santa Monica. There were about six people there and you got very furious at the fact that it was so badly attended. This was the "No Oil" campaign, I believe, and you supported that financially and that really began your own efforts at trying to heighten awareness.

Now obviously with the Exxon Valdez incident and other incidents, as you say we are seeing more headlines. We are seeing more—a general kind of awareness.

Is it your sense that that is building into a new kind of political movement, such as we saw back in the 1960s when the early environmental movement started, or do you think it has not yet reached that kind of political activity? That people are still just saying well, what can I do, rather than doing something?

Mr. DANSON. No. Everywhere we go, there are small groups that are doing things. I mean, everybody now is wanting to do something and beginning to—Valdez did unfortunately create a lot of activism in this country again.

We are having Earth Day coming up in 1990 and people want to play—people want to do something about this. This is a very active time.

Senator KERRY. With the mentioning of Valdez, let me turn to the Senator from Alaska, and ask him if he would like to ask questions at this point?

Senator STEVENS. I welcome your efforts. There is no question about that. As I listened, I hope the net result of your campaign is not to further inundate Congress with mail.

Mr. DANSON. Appropriate mail.

Senator STEVENS. Well, I have got to tell you about that mail. The mail in my office daily now exceeds that which came in during the week of the invasion of Cambodia, which was the highest level that we ever recorded up until that time, and people are being told to write to their congressmen and senators and after they do it they think they have done something about the environment.

They still go down and fill up their Mercedes and they still go to the store and get packages in plastic bags, instead of carrying, as most people in the world do, something to the store to bring their groceries home. They still go out in the back yard and put their fertilizer on their lawn.

I am not sure that writing to their congressman or senator ought to give them the pleasure of having done something about the environment, because we cannot really do anything with a letter except to spend your money to answer it, and if we do not answer it we are in real trouble. I do not think that is the way to deal with this environmental problem.

If activism is to start, it has got to start in each block, in each square of a county, in each county, in each state. We are trying to do that up our way.

You are right, the Exxon Valdez has shocked a lot of people. It certainly shocked us and continues to shock us today, and we are going to go out there on the floor in a few minutes and try to see what we can do to prevent those things in the future.

I, as one who grew up in that Santa Monica Bay that you talk about, I remember a great deal about that Bay, and I remember swimming in the Potomac as a boy when I first came here.

It seems to me that there are a lot of things that we do. You mention, putting the figure out that—and it is right—that 75 percent of our people will live within 50 miles of a coastline before the year 2000. But one of the reasons is that people have demanded that incentives that we used to give people to live in rural areas be terminated.

We no longer support the development of hydro projects in South Dakota, and South Dakota is losing population very rapidly. We no longer have the incentives for the development of smaller roads for access into smaller portions of our country. We build super highways that burn more and more fuel and build bigger and bigger airplanes so people can fly more and more.

I really think that the problem cannot be solved here in Washington. In the final analysis, it has got to be solved in the heart of every single American and they have got to make up their minds that they have got to stop polluting and that we have got to use that 2,950 miles in between the two 50-mile belts down on the east coast and the west coast.

If they decide to do that, we can have some new programs. Congress can pass some programs to give an incentive for people to move away from Los Angeles, to move back into South Dakota, move back into some of the interior states and to set up some very interesting things.

I do not want to lecture you, but I heard a comment the other day. Someone said, we ought to build fiber-optic highways. If we did, then people could function with the computer systems and what-not in the hinterlands of the United States and they would not all have to go into that 50 mile belt along each coast.

The solution cannot be just right in Congress, and I would urge you to find some way to put your well-intentioned activities into starting programs that will bring about results that do not require money, that do not require people to spend more taxpayers' money to clean up someone else's pollution. That is our great problem today.

We saw garbage coming out of the East Coast that could not find a home. We found pollution from medical facilities on the beaches in New Jersey.

And I have got to tell you that when I go back to my family's place in California, when I walk up and down the beaches, it is not the same. They are contaminated almost to the extent that the New Jersey beaches were contaminated.

And the ethic that you seek to create, in my opinion, is the best thing that you are doing. That environmental ethic, the desire not

to be a part of the problem, ought to be our goal today, rather than to increase federal programs.

And I think we would do anything we could to help you convince the American public to join your crusade and be part of it, and to be able to say every day, I did my part in stopping the pollution of the waters, of the lands and the destruction of the habitat for our wildlife.

I think you are to be really commended, as the Chairman said, for taking your time to volunteer to lead this effort and I will tell you, there will be no partisanship in the support of your efforts, because this cannot be a partisan problem.

Thank you.

Mr. DANSON. Thank you. I agree with you. I think that is well said, and I did not want to leave you with the impression that it is your job, because it is not. It is our job.

I think there does need to be coordination on a federal level on some of these issues, because each state cannot go alone.

And I think there needs to be some things changed that can only be done at the federal level, like consistency, return to the states. So I mean, that is the kind of leadership I am talking about—not that you all will fix it. I mean, absolutely, it is us who will have to fix it.

Senator STEVENS. Have you encountered in California this collision between county, state and federal officials involving questions about who was right and who should start first, and who has the right to approve the plan first, and who has the right to have the last say on the plan, and how do we finally get the approval for somebody to do something about polluted areas?

Mr. DANSON. I am sure there must be. Bob probably would be able to answer that better than me.

Senator STEVENS. Mr. Sulnick, have you got that problem out there too?

Mr. SULNICK. Yes, Senator, we have it and we have it quite seriously. We have the county of Los Angeles wanting a waiver to dump sludge. We have the city of Los Angeles which just created a Department of the Environment.

We have the city of Santa Monica with its own non-point source pollution program. And we have a state government which is trying to dismantle our coastal commission.

So we are having a collision of state and local officials and programs. And, therefore, we are not moving forward. We are really in a very serious holding pattern because of that. It is probably the most serious problem we are facing in California's environmental politics.

Senator STEVENS. I think we ought to go out and take a look at that. Because if we went to my state and looked at the same problem, everyone would say, there are those crazy Alaskans fighting again. But we have the same problem.

I do not think it is a matter of population. It is a matter of, really, turf. It is a matter of entities, they all want to have the last say, and they all want to be able to be the ones who devise the plan, and it is holding everything up, because no one's in charge.

Mr. SULNICK. Well, the problem now is exacerbated because the environment has become so in vogue amongst the political world. I

do not mean that in a pejorative way. And so each of the politicians that would have this movement is in collision with the other. And that is a problem for us in California.

Senator KERRY. I might say, I share the concern of the senator from Alaska regarding people's activities out there. But at the same time, I also believe very, very strongly, there is an enormous amount more, not only that we can do, but that we have to do in order to change some of that.

Because as far as plastic bags go, and styrofoam, and some of the things that are out there, I am convinced that the economics are such that you are not going to change their usage until you have some kind of mandate with respect to recycling and some kind of mandate with respect to packaging and so forth.

And we are going to have to do that, because no company is voluntarily going to give up its income from those matters while another one is doing it, unless Ted Danson and a lot of other people have created an economic epic by virtue of boycotts, and other kinds of things, where people begin to see it in their interest.

But I suspect it is going to have to be a joint effort, and we are going to have to move on this, not three years from now. We know the destruction that just plastic is doing to the marine life, let alone the toxics, pesticides, runoff and everything else.

Senator STEVENS. Mr. Chairman, I think that is where it ought to start. We, at the very least, ought to examine the requirement of having biodegradable material in anything that is a container that is made of plastic. We have already done it with our own fish nets. The world has not followed us, particularly those in the Pacific.

And I thank you Mr. Danson for mentioning that scourge in the North Pacific. I think that is really a sad case.

Senator KERRY. Thank you very much, Senator. Senator Robb.

Senator ROBB. Thank you, Mr. Chairman. I feel a little bit like Yogi Berra. This is deja vu all over again. I have been increasingly aware of some of the statistics that Mr. Danson cited. As a matter of fact, I can think of citing them in just minor variations over the years as we develop a more compelling case.

In my own state of Virginia we have been concerned for about the last decade with a concerted effort to clean up the Chesapeake Bay, and all of the terminology that is a part of this larger question of the oceans is very much involved.

I am wondering if there is—Mr. Danson, if you or your colleagues have any suggestion, picking up on what Senator Stevens talked about, the role of creating public awareness, and I think it is terribly important because, obviously, you need to get some consensus in determining there is a problem.

But I have always found that once you get a consensus on the fact that there is a general problem, you need to get a little bit more focused in terms of how we respond specifically within, again, using the Chesapeake Bay as an example.

I was then governor, and the other governors got together with the mayor of the district, Pennsylvania and Maryland, and formed compacts. We had a number of meetings. We agreed to pass a number of individual laws that would restrict some of the agricultural non-point runoff, to address the nutrients problem. A number

of other specific problems that came up—allocated monies for specific programs.

At the federal level, I am wondering if your particular organization has suggestions of what we might be able to do specifically first, beyond raising public awareness of the problem, to begin to provide some real focus for the effort—the biodegradable plastics and others or a substitute for plastics is one that has been talked about a great deal.

A number of things have been done in the agricultural area to encourage the no-till-type planting, to use filter strips.

But until we start to focus on specific remedies, we end up, I am afraid, continuing to wring hands with each other.

Are there things that you are specifically advocating—one or two focal points for federal action that you think we could make a real difference at this point over and above the legislation that is on the table today, or a specific part of that legislation that we ought to focus on to move this effort beyond the stage where we are simply sharing our increased awareness with each other?

Mr. DANSON. Everybody's writing notes furiously on either side of me, so I am going to let them talk.

Mr. PALMER. I might just suggest that, I know that the Clean Water Act was renewed a few years ago, and there was some language about the non-point source program put in it, and states are being required to prepare non-point source control plans.

My understanding, though, is I think that needs some oversight, and that may need a real boost in that program effort.

The reading so far from the environmental community on what has been done by the states is pretty mixed, and part of the problem, obviously, is money. They are not being given any money, but they are being told they have to develop these programs. And the non-point is a very, very large problem, as you well know, from your experience as governor in dealing with it in Virginia, and as a part of the three or four states that are surrounding it.

The other area, I think, is land use, which this bill, certainly, the one that Senator Kerry has introduced, certainly has, I think, the proper elements to start building.

We have heard a lot from people in New Jersey yesterday about their concern about coastal development—that it is rampant. That it is not being controlled, and New Jersey, I think, is rated as having one of the better coastal zone management programs. So there is a large—I think those two areas would be an excellent place for the Congress to start.

Mr. SULNICK. Senator, if I may, I would like to support Mr. Palmer's comments with the following.

When we first organized as an organization, we met with the scientists from the Scripps Institute, and they told us if we really wanted to do something seriously, we should involve ourselves in non-point source pollution, because they felt that was the single, biggest threat to the well-being and health of the coastal zone.

And, of course, we have since learned that that coastal zone is the place where the stuff of life for the ocean is developed and breeds and prospers.

And I think that in regards to non-point pollution, we should consider the following:

As of now, we really do not test to see what kinds of chemicals and heavy metals come out of our storm drains. We are basically testing for picocoliform and bacteria.

And we do not have programs that are designed to deal with the removal of the toxics, if the toxics are the single, biggest threat to the health of their coastal environment.

So from my point of view, it seems that we should begin to focus in on the non-point source problem, in terms of first measuring to see what is it really there in the way of toxics, identifying the sources of those toxics, and then begin to push for toxic reduction, so that that poison does not infest our coastal waters. Because if it does, we will not only kill the economies dependent upon that, but we will kill the stuff of life of the ocean. And, of course, the oceans are the lungs of this planet. They provide 70 percent of our oxygen.

So I would agree with what Mr. Palmer said regarding non-point pollution. That would be a very, very valuable place to begin to focus.

Senator ROBB. Let me just suggest to you that it might be worthwhile to develop that focus in the creation of additional public awareness. It is useful to have some sort of an agenda item that is inherently, or implicitly, a part of the overall approach that you are making.

But I join our Chairman and others in commending you for the effort that you are making in this area. I think it is one that is probably increasingly appreciated but still not sufficiently in front of the public consciousness across the board. People should make individual decisions, such as the ones that you were talking about earlier, based on a knowledge that it has consequences in their drainage area which ultimately ends in the incremental degradation of the ocean or the estuaries.

I thank you for your testimony.

Mr. DANSON. Along with what Senator Stevens mentioned, we feel that our job is also to make sure that the people, when they go to the markets, know that there is an alternative to household toxics, and there is a way—we have designed a toxic wheel, where you can look at every household toxic and see a substitute that is biodegradable and that it is not a problem. And we plan to get that out so that we can start doing, we can cut down on non-point at the source—at our homes.

Mr. SULNICK. And we have also developed a series of public-service announcements. There is one with Ted and Kermit the Frog about to air, which focuses on non-point pollution. And we feel that getting the message out to young people is as important as getting them out to their parents.

Senator ROBB. No question about it. Thank you, Mr. Chairman.

Senator KERRY. Maybe we better ask Kermit to come and testify, too.

Senator Pressler.

Senator PRESSLER. Thank you, Mr. Chairman. I think most of the questions I had have been covered. Thank you very much.

Senator KERRY. Thank you very much, Senator.

Let me just say, I know you are working; you have been going 22 hours straight, and you are working on very little sleep. We appreciate your being here.

I just think it is clear from the discussion of Senators Stevens and Robb, your testimony and the answers to questions indicate that we have really got to take this from the back burner, or no burner, and make sure it is on a front burner by beginning to process some of these ideas.

There have been a lot of ideas floating around about waste management, processing and control, and so forth, but the relationship with plastic biodegradable material and toxic, non-point source has got to become a much higher focus.

We are going to hear from the government folks shortly, and no doubt, we will want to pursue that with them.

I might also add that for the last eight years we have seen—and this is not to be taken as a partisan comment, but it is an observation of fact—every year coastal-zone management grant budgeting has been zero funded. Zero funded.

Now, you cannot pretend that you are making a commitment to something when you have no money proposed to be part of the program which is dependent on the federal grant as the enticement for states to participate.

The whole theory of the original Coastal Zone Management Act was that the only real leverage the states had in order to maintain federal/state relations, as people thought it ought to be, was to offer money. And the money was the enticement for people to commit. It is a voluntary/participatory program. Nobody is mandated to take part in it. They take part in it because they are going to get money.

But, if for eight years the administration says, "zero money," then you are sending an extraordinary message to people about priorities.

Now Congress each year puts money in. But when you are beginning with an administration that says zero, and you are already under extraordinary fiscal constraints, you are limited in terms of putting money into it, and you certainly are not saying to anybody, this is a priority.

So it is absolutely imperative, as OMB sits there now, and I know they are discussing what their commitment is going to be next year.

Incidentally, the Bush administration continued the zero-funding habit this particular year. That is not a good beginning for creating the legacy of environmental presidencies.

And it is my hope that we are going to get this process going. And I tell you, this Chairman is going to be relentless, to the point where people may begin to say it is "Johnny One Note," or something. But the accountability process is not going to be haphazard as I hope we have proven in the course of the Exxon-Valdez process, where we have already had three hearings after the fact in order to follow up on what is happening.

And, Mr. Danson, I am very appreciative to you for coming, for taking the time, for your involvement, and for helping to create this environmental ethic. If Americans do not wake up and begin to say, no more plastics, and no more throwaways; we are going to begin to deal with this problem, and we are willing to pay for it, then all of our rhetoric is going to be reduced, I am afraid, to nothing more than that, and none of us wants that to happen.

So I thank you. I hope you get some rest. I look forward to seeing you up in Massachusetts when we have our Saturday morning visit, and I look forward to that very, very much.

Mr. DANSON. Thank you.

Senator KERRY. Thank you for being with us today. Do you have anything you want to add before we close?

Mr. DANSON. No. Thank you very much.

Senator KERRY. Thank you very, very much. We appreciate it.

If we could have the members of the second panel come forward. The Assistant Administrator from the EPA and the Assistant Administrator from NOAA, Ms. Hanmer and Mr. Maginnis.

Ms. Hanmer, if you would lead off. We appreciate both of you coming and thank you for patience. We look forward to your testimony. Clearly, if you choose to summarize, the committee will place your full testimony in the record. And we would be delighted to get into the dialogue.

STATEMENT OF REBECCA W. HANMER, ACTING ASSISTANT ADMINISTRATOR FOR WATER, OFFICE OF WATER, ENVIRONMENTAL PROTECTION AGENCY

Ms. HANMER. Thank you very much, Mr. Chairman. I appreciate the opportunity to appear to discuss this subject, because clearly there is an extremely important interaction between the Coastal Zone Management Act and the Clean Water Act. And it is time to talk about it.

I have with me Dr. Tudor Davies, who is the Director of our Office of Marine and Estuarine Protection. His office is the focal point for EPA's activities in protecting coastal waters.

Clearly, I do not have to elaborate on the problems with the Nation's coastal waters; they have already been talked about this morning. And I think that we are very, very aware that despite the fact that we have made a major investment, as has been said in point source pollution control—in fact, we estimate probably municipalities and the Federal Government and states and industry have invested about $200 billion since 1972 in dealing with point sources of pollution control—we still have a long way to go.

Especially in the coastal zone, we are continuing to lose, rather than gain, in terms of water quality and aquatic habitat.

The programs administered under the Coastal Zone Management Act by our sister agency, NOAA, represent a range of cooperative efforts among federal, state and local levels of government, which can deal with some of these intractable environmental problems that we have left to deal with in the coastal zone.

At the heart of many of our coastal water quality problems is the very set of land and water use issues that the Coastal Zone Management Act was designed to address. While the Clean Water Act addresses the chemical, physical and biological integrity of the Nation's waters, and our authorities have recently been strengthened by the 1987 amendments; the Coastal Zone Management Act deals with the land and water activities that have effects on the coastal waters.

From our perspective, one of the greatest strengths of the Act is its clear directive to the states to work with local governments to

develop land and water use management programs that will preserve and protect the natural resources of the coastal zone.

As has been indicated earlier, a large portion of the contaminants entering coastal waters now comes from non-point sources stemming from land use activities in the coastal watershed—such as runoff resulting from agriculture, construction and development practices that states and localities can manage through their coastal zone management authorities.

Much of the loss of coastal wetlands derives from these same practices and can be reversed or significantly addressed with effective coastal zone management policies.

In short, then, the success of our effort at EPA, under the Clean Water Act and the Ocean Dumping Act, to protect and restore coastal waters, now depends, to a large extent, on the kind of onshore support that states and localities are encouraged to provide through coastal zone management.

Several years ago, EPA established a strategy, which we call the near-coastal water strategy, to improve the effectiveness of our environmental protection efforts in near-coastal waters. More recently, we have issued a national coastal and marine policy.

These efforts have led to increased levels of cooperation between the EPA and NOAA, and also between our respective state counterparts.

For example, our two Administrators recently signed an agreement that outlines and endorses many points of coordination between the Coastal Zone Management Program and our National Estuary Program. We viewed this agreement as a first step toward better coordination between the two programs, and we intend to move further with these efforts.

It seems to me that your bill addresses a major area for further work, which is the integration and relationship between the coastal zone management authorities at the state level and the state nonpoint source management plans that are now being developed by water quality agencies under the 1987 amendments.

It is important to keep in mind ways in which the Coastal Zone Management Act and the Clean Water Act can be mutually supportive as you move toward your decisions on reauthorization of the Coastal Zone Management Act. As I have said earlier, we really cannot overemphasize the degree to which future progress on coastal pollution depends on dealing with coastal land use practices, and instituting practices that reinforce, rather than undermine environmental protection.

Both statutes, that is, the Clean Water Act and the Coastal Zone Management Act, have distinct, but complementary tools that can be used to reinforce and strengthen action at all levels of government.

It is important, however, that Coastal Zone Management Act amendments enhance coordination between these programs and not create competing or overlapping authorities with the Clean Water Act programs which we would need to work out in order to continue to achieve momentum.

Recognizing that the Coastal Zone Management Act was enacted as a land and water use statute, we also suggest that the time has come to enhance the Coastal Zone Management Act's role as an

important environmental management statute. When it was first enacted almost 20 years ago, the law carried with it language about balancing protection and development.

Certainly, I think in the intervening years, we have come to understand that environmental protection and economic growth are integrally connected and not competing. It may be time to reexamine some of the earlier language to ensure that protection and enhancement of coastal resources and habitat are fundamental to the goals of the Coastal Zone Management Act, and to decisions on activities that affect the coastal zone.

Another issue might be the boundaries. The boundaries of the coastal environment are far-reaching. And coastal waters receive a multitude of inputs from the atmosphere as well as the land, as has been indicated.

A broader view of the coastal zone is essential in order to provide the necessary environmental protection. In any program addressing water quality, we have to consider the impacts of activities throughout the entire watershed and the pollutant and nutrient inputs into the streams and rivers feeding into estuarine and near-coastal waters.

That means that the provision you have in the bill, which indicates that states should look at the boundaries of their coastal zone, is very well taken from the standpoint of increasing the effectiveness of this law to deal with water quality problems.

The Coastal Zone Management Program has already encouraged many states to develop coastal wetlands protection programs, including regulation of activities taking place in coastal wetlands and other special coastal waters.

However, the level of protection provided by state coastal wetland programs developed under the CZMA at present varies considerably. EPA is working with the states to help them develop more comprehensive wetland protection and restoration programs through our Clean Water Act authorities.

One way to strengthen these programs and provide greater consistency among state coastal wetlands programs would be to incorporate the President's policy of no net loss of wetlands in the Coastal Zone Management Act.

Finally, I believe that Mr. Danson and the American Oceans Campaign have put their finger on a couple of critical elements: money and public support. Certainly, from our experience with administering very strong environmental laws, we really cannot get there from here, going through our traditional source control authorities and going down from the Federal Government through the state governments. We have to energize the local level.

The types of activities that are going to be necessary to protect the coastal zone, in terms of land use, will require discipline; they will require local public support in order to bring those off.

Furthermore, to do the coastal pollution control activities that need to be done—to control storm water to a greater degree, as well as combine sewer overflows, which are part of the marine debris problem, to deal with residual waste treatment issues, to deal with controlling toxics from storm waters—at the local level are very costly. And it will be local citizens who will have to foot the bill.

And so the issue of mobilizing local support, helping people understand not only what they can do in their households, but what needs to be done in their communities, and needs to be financed, is the most critical element, as we see it, to moving forward with a program, really, to save the coastal oceans.

I am going to close my statement now, but I will be available to answer questions you might have about the non-point source program, or the funding issues, or anything of the things that we can help you with.

And again, thank you very much for giving us a chance to speak to this important bill.

[The statement follows:]

STATEMENT OF
REBECCA HANMER
ACTING ASSISTANT ADMINISTRATOR FOR WATER
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
NATIONAL OCEANS POLICY STUDY
COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION
U.S. SENATE

August 3, 1989

Good morning, Mr. Chairman, I am pleased to appear before you today on behalf of the Environmental Protection Agency to discuss reauthorization of the Coastal Zone Management Act. The programs established and carried out under the Act by our sister agency, the National Oceanic and Atmospheric Administration, represent a range of cooperative efforts among Federal, State and local levels of government to deal with some of our most intractable environmental problems.

There is little doubt that some of this Nation's most serious remaining water quality problems occur in coastal waters. The Clean Water Act and the Ocean Dumping Ban Act have allowed us to begin to win the battle for our surface waters and even the battle for the world's oceans. However, there are areas for improvement. While significant progress has been achieved in controlling pollution from point sources, nonpoint source pollution, solid waste disposal, and explosive growth and development in the coastal zone continue to be major obstacles to attaining a clean and healthy environment. With the majority of

our nation's population living within an hour's drive of the coastline, including the Great Lakes, the pressing nature of these problems is considerable.

At the heart of many of our coastal water quality problems is the very set of land and water use issues that the CZMA is designed to address. While the Clean Water Act addresses the chemical, physical, and biological integrity of the nation's waters; the Coastal Zone Management Act deals with land and water activities that have effects on the coastal waters. From our perspective, one of the greatest strengths of the Act is its clear directive to the States to work with local governments to develop land and water use management programs that will preserve and protect the natural resources of the coastal zone.

A large portion of the contaminants entering our coastal waters now comes from non-point sources stemming from land use activities in the coastal watershed -- runoff from agriculture, construction and development practices that States and localities can manage through CZM. Much of the loss of coastal wetlands derives from these same practices, and can be reversed with effective CZM policies. In short, the success of our effort at EPA to protect and restore coastal waters now depends largely on the kind of on-shore support that States and localities are encouraged to provide through coastal zone management.

Several years ago, EPA established a strategy to improve the effectiveness of our environmental protection efforts in near coastal waters. This has led to increasing levels of cooperation between EPA and NOAA and between our respective State counterparts. For example, the Administrators of NOAA and EPA have signed an agreement which outlines and endorses the many points of coordination between the CZM program and our National Estuary Program. We view this agreement as a first step towards better coordination between these two programs among our two Agencies as well as with the States. Coordination is particularly strong in the Buzzards Bay Estuary Program. This estuary program is headed up at the State level by the Massachusetts coastal zone management agency. We need to continue and expand our efforts to better integrate CWA and CZMA goals and objectives into the day-to-day operations of both national and State programs, especially in controlling nonpoint source pollution problems.

Another area of growing cooperation between our two Agencies is the current research effort underway to better define the conditions and trends in the health of our coastal resources and those land, water, and air systems affecting them. Our Environmental Monitoring and Assessment Program and NOAA's Status and Trends Program will lead to improved monitoring and diagnostic tools and data to answer priority management questions. It is particularly important to link the pollutants

22-197 - 89 - 3

to their sources and to determine how well our management decisions are working.

We need to continue to expand our efforts to better integrate CWA and CZMA goals and objectives into the day-to-day operations of both national and State programs, especially in controlling nonpoint sources of pollution. As you move toward your decisions on reauthorization of the Coastal Zone Management Act, we hope you will bear these experiences in mind. In particular there are a number of ways you could consider to reinforce the positive trends we already see underway.

First, it is important to keep in mind ways in which the CZMA and the Clean Water Act can be mutually supportive. We cannot overemphasize the degree to which future progress on coastal pollution depends on coastal land use practices that reinforce environmental protection. Both statutes have distinct but complementary tools that can be used to reinforce and strengthen actions at all levels of government. For example, the 1987 Amendments to the CWA created a new nonpoint source management program giving the States the lead in developing and implementing State Management Programs to control nonpoint source pollution in order to protect water quality and habitat. Since nonpoint source pollution is most often the direct result of past and present land use practices, close cooperation between CWA and

CZMA authorities is key to the successful development and implementation of management plans.

There is a need to call for improved coordination between State coastal management and water quality agencies. While there are places where the two programs have worked well together, there are others where the experience has been less than smooth, and frankly still others where the programs seem to seldom encounter each other. This is especially true when the two programs are located in different branches of government, as when the coastal agency reports directly to the Legislature. We are not suggesting reducing the flexibility of States to design their agency structures; rather, we need a way to have the States measure the gaps between these two closely related efforts and close them.

Second, recognizing that the CZMA was enacted as a land and water use statute, we suggest that the time has come to enhance the CZMA's role as an important environmental management statute. When first enacted, almost twenty years ago, it carried with it language about balancing effective management, beneficial uses, protection and development. In the intervening years we have come to understand that environmental protection and economic growth are integrally connected. Healthy, resource-abundant coastal waters provide the livelihood for many of our citizens. It may be time to reexamine some of the earlier language to

ensure that protection and enhancement of coastal resources and habitat are fundamental to decisions on activities that affect the coastal zone.

Third, the boundaries of the coastal environment are far reaching and coastal waters receive a multitude of inputs from the atmosphere as well as the land. A broader view of the coastal zone is essential in order to provide the necessary protection. In particular, we must consider impacts of activities throughout an entire watershed and the pollutant and nutrient inputs into the streams and rivers feeding into estuarine and near coastal waters.

Fourth, the CZMA program has encouraged many states to develop coastal wetlands protection programs, including regulation of activities taking place in coastal wetlands and other special coastal waters. However, the level of protection provided by state coastal wetlands programs developed under CZMA varies considerably. EPA is working with States to help them develop more comprehensive wetland protection and restoration programs. One way to strengthen them and provide greater consistency among state coastal wetlands programs would be to incorporate the President's policy of no net loss of wetlands.

All coastal States can benefit from the focus and discipline that the CZM process brings to coastal decision-making.

Certainly, EPA's Great Lakes Program and the States might be able to deal more effectively with environmental problems if there were approved CZM efforts in Ohio, Indiana, Illinois, and Minnesota. Similarly, having an approved CZM program in Texas would benefit our efforts in Galveston Bay and the Gulf of Mexico. While NOAA deserves much credit for having obtained the voluntary participation of twenty-nine of the thirty-five eligible States and territories in the CZM, the effort should not cease until there are broad-based and effective coastal management efforts in all our ocean and Great Lakes States.

This concludes my statement. Thank you for the opportunity to comment on the reauthorization of this important statute. I will be happy to answer any questions.

Senator KERRY. Well, thank you, Ms. Hanmer. We appreciate your testimony and know that you ofter very real expertise with it. So we are delighted to have you here.

Mr. Maginnis.

STATEMENT OF THOMAS J. MAGINNIS, ASSISTANT ADMINISTRATOR, NATIONAL OCEAN SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE

Mr. MAGINNIS. Thank you, Mr. Chairman and members of the subcommittee.

It is a pleasure to appear before you today on behalf of the National Oceanic and Atmospheric Administration. First, I would like to note that sitting behind me in the audience are members of the Office of Ocean & Coastal Resource Management of the National Ocean Service, along with Ms. Virginia Tippe, the Director of NOAA's Estuarine Program Office—an office created in the early 1980s to address problems exactly like this.

Senator KERRY. I notice also looking at the audience, apart from your observation that with Mr. Danson's departure, it has become significantly more balanced between male and female.

Mr. MAGINNIS. No comment.

I have more detailed testimony to submit, but I would like to summarize that testimony in a short five-minute statement.

Let me begin by extending my compliments to you. You have initiated a set of hearings at a time that we can give early attention to Coastal Zone Management reauthorization. While the Act will not expire for another year, it is good to begin this process early so that the ideas and the issues surrounding reauthorization can be given a thorough airing and review.

As an agent for the States of Oregon, Washington, California and Alaska under the Coastal Zone 309 Program for two and a half years, and now as the Assistant Administrator for the National Ocean Service, which administers the Coastal Zone Management Act, I am heartened by what I see as a renewed interest in the wise tools that have been made available by the Coastal Zone Management Act, and the concepts that were laid down over a decade ago.

We have 29 successful state Coastal Zone Management programs. They were developed to establish a balance between our common concerns over preservation of our coastal ocean areas and the needs of the residents of those areas to earn a decent living. These programs have always promoted the Federal interest, according to what the Federal interest was at that time. As coastal areas have become more pressured through in-migration and development, it is obvious that the Federal interests must turn more toward the threat of degradation of that sensitive coastal environment.

The Administration is in the process of appointing new NOAA management. The new team has already begun a thorough review of the impending Coastal Zone Management reauthorization and related policy. Secretary Mosbacher, in his letter to the Coastal Zone 1989 conference that was convened the week of July 11th in Charleston, South Carolina, invited suggestions from interested parties—yourselves included—for ways to forge a new partnership among all involved in coastal management. That is, the Federal Government, the states, the private sector, academia, and the residents of those areas.

You are also reviewing the reauthorization process, and I hope you will have time for field hearings so that you can hear the needs of all sides. That is, urban, rural, small business, industrial, and environmental interests that reside and depend on the coastal areas.

I think you may be surprised at how many of your constituents in the coastal areas depend on a clean, healthy environment for their livelihood.

In Oregon, where I lived until about a year ago—I lived on the Oregon coast in Newport—we used to say that 90 percent of our economy could be summarized under the four Fs, fishing, forestry, farming and, since tourism does not begin with an F, fun. And we felt that each one of those depends on a healthy coastal environment.

In NOAA, we want to work closely with your committee in this process, as we thoughtfully consider all the suggested changes for this Act.

You asked in your letter for NOAA to identify high priorities for improving coastal management. I would like to briefly touch on a few areas that we have begun to review.

First is coastal pollution. It has become increasingly clear over the years that many coastal and environmental programs are linked directly to land use and development practices that may be hundreds, and in a few cases, as much as 1,000 miles inland, in the watersheds of the rivers that drain onto the coast.

We know, for example, that one of the greatest single causes of all pollution is non-point source runoff. And of course that is thou-

sands of incremental bits of pollution added to our rivers and streams, primarily through agricultural practices.

We should consider ways that the Coastal Zone Management Program might be modified to strengthen state policies and practices in this area. The non-point source management provision, which was recently added to the Clean Water Act, needs to be coordinated and, where appropriate, integrated with the Coastal Zone Management Act.

In the area of wetlands protection, there is also increasing concern. All of our Coastal Zone Management programs have elements that address the preservation of wetlands. We should look at the underlying Coastal Zone Management policies to see if they are sufficient. We should define and include in a reauthorization package the "no net loss" goal, which has been endorsed by the President, into those approved Coastal Zone Management programs.

Our Nation's coastal resources are finite, and development pressures are increasingly limiting opportunities for public access to the coast. In light of the trend toward greater population in the coastal areas, the Coastal Zone Management policies designed to encourage states to provide public access areas and facilities may need to be strengthened.

In the area of coastal hazards and sea level rise, the Coastal Zone Management Act should provide a current framework for dealing with the emerging issues related to global change and greenhouse warming.

There are a number of opinions about whether the sea level will rise as a result of global warming, but that is really not terribly relevant. Because, whether the sea level will rise or not, in many areas the land level is subsiding, with the same effect: erosion and increased risk of death and destruction from storm surge.

So, we need to pay more attention to coastal hazard mitigation. I might add that North Carolina has some good ideas here. You know, the states in law school are often called the laboratories for the Nation. And, as we go through this process, I think it is important to look into what the states have been doing to cope with these problems.

I am aware, and I am sure you are, that there are a number of new ideas out there that could be incorporated into national legislation.

Finally, a brief comment on Federal consistency. Section 307 of the Coastal Zone Management Act requires that Federal agency activities affecting the coastal zone be conducted in a manner consistent with the State's Federally-approved coastal zone management plan. In general, NOAA believes this process has worked well.

However, in *Interior* vs. *California,* the Supreme Court held that Federal consistency does not apply to oil and gas lease sales on the Outer Continental Shelf. Some Federal agencies have interpreted the Court's decision to apply to other areas, thus resulting in confusion. Though, I would like to add that those agencies that have taken this position have offered partial voluntary compliance, so far.

To eliminate the confusion, the Subcommittee might clarify the congressional intent in this area.

Mr. Chairman, I have only been able to hit the highlights in my allotted time; there is a lot of work in front of us and we are very eager to work with you. I thank you for the opportunity to testify today.

I would be happy to respond to any questions.

[The statement follows:]

TESTIMONY OF THOMAS J. MAGINNIS
ASSISTANT ADMINISTRATOR
NATIONAL OCEAN SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION,
AND THE NATIONAL OCEAN POLICY STUDY

UNITED STATES SENATE

AUGUST 3, 1989

Mr. Chairman and Members of the Committee:

It is a pleasure to appear before you today on behalf of the National Oceanic and Atmospheric Administration (NOAA) regarding the reauthorization of the Coastal Zone Management Act (CZMA).

The CZMA was enacted in 1972 and established a national coastal resource management framework to assist States and territories in developing the capability to manage their coastal resources. NOAA has provided financial and technical assistance and policy guidance to States and territorial governments to prepare and implement programs which balance the use and conservation of coastal and ocean resources. Twenty-nine coastal States and territories covering 94 percent of the U.S. coastline now have federally-approved coastal management programs. The Federal Government has invested over $600 million in these State programs over the past 15 years.

The previous Administration's position was that the CZMA had been successful and the objectives of the Federal funding had been

achieved. Consequently, elimination of the authorizations for Section 306 (State Program Administration Grants), Section 306A (Resource Management Improvement Grants), and Section 309 (Interstate Grants) was recommended. The Federal Government, however, would remain committed to providing funding under Section 315 for estuarine research reserves, and for program oversight and administrative functions.

We now have a new Administration which is in the process of creating its own management team in NOAA. A CZMA reauthorization policy will be thoroughly reviewed by the new management team. Until this new management team is in place, we are not in a position to address specific funding levels for the administrative functions and Section 315, or changes in policy regarding States' assistance under Sections 306 and 309. The current law should be carefully examined to ensure that coastal issues are addressed and to improve the administration of the law based on our experience over the past five years. Some of these suggestions are already being considered by the Congress in proposed legislation.

Section 306

Since the CZMA was reauthorized in 1986, the population of the Nation's coastal areas has continued to grow. More than half of the U.S. population now resides in the coastal counties, on less than ten percent of the Nation's land. This burgeoning population affects a range of environmental quality issues, and

State and local governments need better direction to control this growth and the resultant impact on coastal resources. There are four areas in which we believe the CZMA could be strengthened to help in this task: coastal water pollution, wetlands, coastal hazards and sea level rise, and public access.

Coastal water pollution - While the CZMA requires that State water quality standards be incorporated into the State coastal management program, the issue of coastal pollution was not emphasized in the CZMA. The problems of the summer of 1988 when medical waste washed up on the shores of New York and New Jersey and the continuing problems of closed shellfish beds and restricted recreational areas have forced recognition of the increasing efforts needed to improve water quality. Non-point sources of pollution are a major cause of degradation in coastal areas. The non-point source management provision recently added to the Clean Water Act needs to be coordinated, and where appropriate, integrated with the CZMA to take full advantage of the expertise of the CZM programs. These programs, with their experience in land use regulation, can help move us forward in addressing many of the significant non-point source pollution problems in coastal areas.

Some States are beginning to make efforts in this area. For example, Massachusetts CZM studies have identified stormwater runoff as a significant cause of water quality problems which has resulted in the closure of major shellfish beds in the

Commonwealth. In an effort to address stormwater runoff, the State recently appropriated $500,000 to retrofit existing stormwater drains to improve water quality, ultimately leading to reopened shellfish beds. Similarly, South Carolina has developed stormwater regulations and a model ordinance for local communities. These efforts significantly improve protection of the water quality along South Carolina's 2,876 miles of shoreline. New or restated goals under Section 303 of the CZMA reemphasizing the need to control non-point sources of pollution would assist both the States and NOAA to direct this shift.

Wetlands - The national interest in preserving wetlands and the resources which rely upon them was clearly stated by President Bush in his "no net loss of wetlands" goal. The value of wetlands and suggestions for addressing their loss also have been documented in the recent report by the National Wetlands Policy Forum entitled "Protecting America's Wetlands: An Action Agenda". The Forum emphasized the need for improved planning, information and education, and improved regulatory programs to reduce wetland losses and increase restoration of these areas.

All State CZM programs currently address the preservation of wetlands. All require State or local approval for significant direct alteration of wetlands. Many States require some form of mitigation for wetland loss. For example, New Jersey used a wetlands mitigation agreement with a major utility to get funds to acquire critical wetland habitat along the Delaware Bay which

serves as a landing place for over 1,000,000 birds each spring. Many States also have undertaken public education efforts to increase awareness of the value of these areas. Nationally, 60 to 70 percent of the U.S. commercial and recreational fisheries harvest is composed of species dependent on coastal wetlands and estuaries. Given increasing pressures on coastal wetlands through direct alteration or indirect impairment of function, e.g. contamination by toxic substances, it is imperative that CZMA policies be more focused and place greater emphasis on wetlands protection.

Coastal hazards and sea level rise - The ever-increasing population growth in coastal areas, combined with the potential effects of global warming and associated sea level rise, necessitates stronger policies in the CZMA to manage the increasing risk to life and property. The need for better management is demonstrated by the fact that flood insurance represents the second largest liability to the Federal Government, second only to Social Security.

The positive role of coastal management in reducing the risk from erosion and coastal storms was recently recognized in a publication of the insurance industry's National Committee on Property Insurance entitled "America's Vanishing Coastlines". This document discussed the physical threat and economic impact of erosion and hurricanes on growing coastal development. It concluded that improved land use measures, as are being

undertaken by State coastal management programs, were one of the more effective long-term solutions to these problems.

Under the CZMA, NOAA has funded coastal States' development of improved coastal management strategies, including the adoption of setback regulations to deter development in highly vulnerable areas of the shoreline. Currently, thirteen States have some form of setback requirement for coastal development. However, a comprehensive approach to coastal hazard mitigation is necessary. Such an approach should include evacuation plans, enhanced building code standards and enforcement, protection of the dunes through the use of setbacks and regulatory controls, and planning for redevelopment after a disaster. States must be encouraged to continue these efforts through new direction in the goals of the CZMA.

Public access - Development pressures on the Nation's limited coastal resources are increasing at a rapid rate. While the CZMA contains a planning requirement for public access to the coast, the goals need to be reviewed and strengthened to help States provide more opportunities for public access.

Coastal States have used four methods to enhance public access: land acquisition, inventory and information dissemination, design and development, and regulation. Because of rising costs, acquisition of large parcels of land has been limited. However, States have used CZM funds to acquire small parcels which can make a major difference in the public's ability to use the public

shoreland, as in the purchase of a small lot to be used as a parking area adjacent to the coast. The State of Rhode Island used CZM funds to inventory rights-of-way along the coast and designate them for public access. Funds under Section 306A of the CZMA have been used extensively to improve public access ways through the design and construction of dune walkovers, boardwalks, and boat launching facilities.

Despite these efforts, there is a need to encourage States to undertake a comprehensive inventory of their current public access resources, and to develop a process for future development of access areas and facilities that ties current and projected population statistics and growth management analysis to projected coastal recreational needs.

SECTION 307

Section 307 of the CZMA requires that Federal agency activities affecting the coastal zone be conducted in a manner consistent with the States' federally-approved coastal zone management programs. There are four basic types of activities within the scope of Section 307 including direct Federal agency activities, federally licensed and permitted activities; Outer Continental Shelf (OCS) exploration, development and production plans; and Federal financial assistance to State and local governments.

In 1985, NOAA published a Draft Federal Consistency Study reviewing implementation of Federal consistency requirements

based on data from Federal agencies for fiscal year 1983. The statistical results of the Study were as follows:

- States concurred with the consistency determinations for about 93 percent of the approximately 400 direct Federal activities reviewed under Section 307(c)(1) (including OCS lease sales which were reviewed during FY 83 only);
- States concurred with the consistency certifications for about 82 percent of the approximately 5500 federally licensed or permitted activities reviewed under Section 307(c)(3)(A) (nearly 5000 of which were Corps of Engineers' dredge and fill permits);
- States concurred with the consistency certifications for about 99 percent of the nearly 435 plans for OCS exploration (POE's) and development and production plans (DPP's) reviewed under Section 307(c)(3)(B); and
- States concurred with the consistency of over 99.9 percent of the nearly 2000 Federal assistance proposals reviewed under Section 307(d).

Where States objected, the Study concluded that many of the objections were resolved by further negotiation to develop conditions or mitigating measures. The Study concluded that no legislative changes were appropriate in 1985 and that NOAA would continue to monitor the implementation of Section 307. While we have not updated the statistical data contained in the Study, NOAA continues to monitor Federal actions for consistency, and

generally we believe that the process continues to work well. The 1985 Study was conducted, in part, as a result of a 1984 Supreme Court decision in which the Court stated that the sale of OCS oil and gas leases was not an activity "directly affecting" the coastal zone within the meaning of Section 307(c)(1) of the CZMA and therefore a determination of consistency with approved State coastal management programs is not required before such sales are held. Secretary of the Interior et al. v. California et al. (464 U.S. 312).

After extensive public review of the Interior v. California decision, NOAA issued a final rule modifying its regulations to conform to that decision, stating that only OCS oil and gas lease sales were affected. Questions continue to arise, however, regarding the appropriate scope of consistency review.

NOAA has not yet formulated specific recommendations in this area, but believes it may be appropriate to explore the need for increased clarification on the following:

(a) What activities, if any, outside a State's coastal zone boundary, both landward and seaward, (excluding OCS lease sales) trigger the Federal consistency requirements if they affect a State's coastal zone?

(b) What Federal "paper transactions" (excluding OCS lease sales) -- are subject to Federal consistency?

(c) When a Federal statute contains one of various formulations regarding preemption of State

regulation, what effect does that language have on Federal consistency requirements?

Section 309

Section 309 of the CZMA provides Coastal Zone Management Interstate Grants for the purpose of improving interstate planning and cooperation in coastal management among Federal and State entities charged with managing the Nation's coastline.

These funds have been expended on regional and national issues such as public trust, coastal hazards, fisheries, estuarine management and water quality. In 1988 over one-half of the funds supported interstate estuarine projects. Examples of past efforts include funding the Columbia River Estuary Task Force to develop an interstate Hazardous Waste Contingency Plan for the Columbia River, and a joint project involving NOAA and EPA and the States of Florida and Alabama to enhance the protection of the water quality in Perdido Bay.

We do not propose any substantive changes to Section 309 as the CZMA provides broad discretion to NOAA in the policy direction for that Section.

Section 315

Under the National Estuarine Reserve Research System (NERRS), States and territories receive financial assistance in the form of matching grants to acquire, develop and operate high quality estuarine areas as natural field laboratories and estuarine

education centers. Currently, 18 sites have been established as reserves in 16 States protecting over 300,000 acres of estuarine land and water. Additional reserves are being developed in Delaware, New Hampshire and Virginia.

At this time, NOAA proposes three minor changes to Section 315. They are: 1) changing the name from the "National Estuarine Reserve Research System" to the "National Estuarine Research Reserve System" to avoid confusion; 2) making non-state institutions eligible for education grants to allow grants for educational and interpretive projects proposed by private colleges and universities and other non-state institutions; and, 3) clarifying the authority of the Secretary of Commerce to enter into cooperative agreements with nonprofit organizations and providing the Secretary with the authority to accept donations of funds, property and services for use in designating and administering the estuarine reserves. These changes would simplify and improve the administration of the reserve system.

Mr. Chairman, that concludes my prepared testimony. I will be happy to answer any questions the Members of the Committee may have.

Senator KERRY. Thank you very much, Mr. Maginnis.

A quick question, if I can. In your opening comments in your testimony, Ms. Hanmer, "The Clean Water Act and the Ocean Dumping Ban Act have allowed us to begin winning the battle for our surface waters, and even the battle for the world's oceans." Do you believe that?

Ms. HANMER. Yes. The word "begin" is important. We do have a large set of authorities. The question is whether or not we have got the will and the money to carry those out. And non-point source is a particularly good example of that. The law set up a requirement in 1987 for the states to develop non-point source management plans; there are a lot of good words there. The states are doing it, and some of them have done a very good job, but some are not doing as complete a job because of lack of funding or lack of priority.

Senator KERRY. With respect to the next sentence, where you talk about the significant progress in point-source control, it is my understanding that much of that progress may be in jeopardy. In fact—and no fault of yours, just personnel, manpower availability,

et cetera, at EPA—has endangered the ability to enforce; and the will to enforce in the last few years has been in question. We have gone backwards in the sense that, where we had EPA enforcement and so forth, and even at the secondary level, now, we are back down to primary citizen suits being brought again because of the lack of enforcement.

Could you comment on that?

Ms. HANMER. Yes, I could, because I directed the rebuilding of our enforcement program. It is true, in the first couple of years of the 1980s we had a significant decrease in our enforcement activity. Our current enforcement activity is now greater than it has ever been at any time in EPA's history. And each time we rewrite permits, which have to be rewritten every five years, they get tighter and tighter.

The problem is more that with our resources—and this has always been the case—we have never been able to focus on anything more than about 7,500 major dischargers. In the coastal areas there are thousands of minor dischargers that we have simply never had the resources to address. We are very dependent on the state water pollution control agencies out there doing that job.

Under the Clean Water Act, the construction grants program authorization changed over to be a state revolving loan fund authorization, and one unintended effect of that is that a lot of money that had formerly been available from EPA to state water pollution control agencies has been cut, because it was in the form of construction grant set-asides.

We recognize that we have a funding support problem. And that, I think, is the key, rather than authority, to more enforcement presence in the coastal zone. I do not think it is so much a matter of federal effort as it is our ability to keep the state agencies out there.

Senator KERRY. With respect to the non-point source pollution, particularly the agricultural runoff, do you feel that we have done enough? And do we understand what the sources of the agricultural runoff pollution are? If we have, should we be moving to a ban, in terms of the uses? Where are we in that process?

Ms. HANMER. Well, non-point source pollution is a whole variety of activities and literally millions of different kinds of sources.

Senator KERRY. I understand. I am leaving out storm water, but I am just going to the agricultural piece.

Ms. HANMER. Well, we have areas in which just the fact that earth is moving is a significant problem—namely the siltation problem. And that will be a particular issue where you have spawning grounds in inland streams, and also where you have estuaries that are collecting the silt, and the silt is blanketing the bottoms. That is a matter of land use controls.

The toxics problem is very much associated with the use of agricultural pesticides and fertilizers. We are finding rising levels of nitrates in ground water and in some surface waters.

We have a study going now with the Department of Agriculture under the water quality initiative in President Bush's 1990 budget request, that will look at low-input agriculture. That is, whether or not through voluntary means through the agricultural agencies, we

can develop programs in which farmers essentially are much more conservative about the use of pesticides and fertilizers.

We also have a "pesticide in ground water strategy" that is being developed to focus on particular pesticides that leach; and an initiative to increase the capacity of state agriculture agencies and water pollution control agencies to control pesticide use.

I am somewhat doubtful that that will be enough. There are particular areas where we will have to do much more than that.

Senator KERRY. Are there currently plans to do much more than that, or is this something you are just——

Ms. HANMER. We do have some initiatives in our 1990 budget request that will increase the capability of the states.

Senator KERRY. Let me ask you this. You have been at this a long time, and I know people have a great deal of respect for your judgment with respect to it. Are we at a point where we can do this at the margins? Can we incrementalize on an annual basis, in terms of these budgets, or do we have to begin to say that we have got a larger kind of crisis on our hands, which really demands some sort of upgrading as we are finally beginning to decide we have to upgrade the drug war, and so forth?

Ms. HANMER. If you talk about water pollution control in the coastal zone, because of the crush of growth and development, combining with the fragility of the resource, "crisis" is not too strong a word. I feel a great sense of urgency about it. And I do not believe right now that, at the federal, state and local level, we are behaving quite as if it is urgent. I think it is important to us. We have incremental programs; we have a lot of good ideas. But we have a tremendous funding problem we must break through.

We have been trying to help the states, which are having a tremendous funding problem just running the programs they have, to look at innovative ways of raising money. Many states have special fee systems, taxes, mark-offs on state taxes, fees on discharges. Florida has a fee on land transfer. We are going to have to look at a lot of innovative funding mechanisms in order to put enough money in the local and state governments' hands.

And then I think we have to talk to people about will. I still meet local land use people who say that environmental protection is really irrelevant to their concerns. We have to change that.

Senator KERRY. Now, originally, when CZMA was being contemplated in the early formulations of it, there was a great deal of tension on the table between land use and water quality control. During the Nixon administration, there was a debate; the first one was primary, and then the other became primary; later, one did not happen and one did; finally, the other followed.

And so we have sort of had this tension since the beginning between land use and water quality/coastal control.

I would like both of you to address the question of what you think we can do through the Coastal Zone Management Act and this process now to address that issue, if anything, and where you would say that relationship is today.

You would probably start with the second part first.

Ms. HANMER. We have the National Estuary Program, with twelve designated estuaries. This is our testing laboratory for models in which federal, state and local governments, citizens, in-

dustries, environmentalists, and the academics, can come together to focus in on specific geographic areas.

Senator KERRY. We probably have one of the best ones in Massachusetts with Buzzards Bay.

Ms. HANMER. Yes.

And what we are learning is that these agencies can work together. We are the farthest along and perhaps most successful in some of our New England projects. People sitting down together can work out joint plans, they can come to agreement about what the problems are for a particular area. And I would say in those areas we are breaking through a lot of the institutional resistance.

We are talking with NOAA about a joint workshop on coastal zone management and non-point source, in which we talk about strategies for areas that are not national estuaries, that comprise the rest of the coast.

Right now, despite the words about people coordinating, we still have something of a stand-off relationship in same areas between the water pollution control authorities and the Coastal Zone Management authorities. The purpose of having the workshop, in my mind, would be dual: to find out from their perspective how things could work better; and secondly, to give you some language from that—I think your bill attempts to craft a relationship—to provide whatever insight we could on how that relationship could be crafted so that we do not inadvertently create two laws that mandate two different sets of agencies to do the same thing.

Senator KERRY. Mr. Maginnis.

Mr. MAGINNIS. Mr. Chairman, of course, you are aware, as we are, that your question is a good example of how intrinsically entwined the Clean Water Act and the Coastal Zone Management Act eventually are, or have to be.

Land use on the coast really determines, to a large extent, the cleanliness of the water on the coast. However, the land use on the coast cannot really address the whole issue because so much of it comes from upland uses. And that is, of course, where the Environmental Protection Agency has a very strong program in the interior.

So, I would say that among the issues you would want to be looking at would be the issue of how you determine the trajectory of the pollutants once they get to the coast; whether they are put on the coast by the local communities, or whether they are upland. You know, coastal pollution tends to emerge as a localized phenomenon. I mean, to the extent that you are affected by it, is because it has been transported from somewhere.

And among the things that NOAA does is a tremendous amount of work trying to determine the circulation of the water and the extent of the pollutants once they have moved to the coast. So, this is an area, the status and trends, which is not coastal zone, but is part of the solution, where you should be paying attention in this legislation.

Senator KERRY. I understand. But what do you say about the relationship, for instance, between NOAA and EPA?

Mr. MAGINNIS. Well, I would not tell you that it has been good for these many years.

Senator KERRY. But that is part of the problem, is it not?

Mr. MAGINNIS. Of course, it is.

Senator KERRY. Why is that?

Mr. MAGINNIS. Well, I think we are experiencing a change in the Coastal Zone Management Program and its perception, even within the Administration.

Senator KERRY. Well, let me ask you. The House, as part of their CZMA reauthorization bill, is proposing to transfer CZMA to EPA because they think EPA will give better support than NOAA has. What do you think about that?

Mr. MAGINNIS. The Environmental Protection Agency has a mission, and that is the control of pollution. And the Coastal Zone Management Act really has a different mission, which is the balance of development and pollution. I think if you move it to the Environmental Protection Agency you lose two things. One, I think you might lose perspective. And as I mentioned in my earlier testimony, the people on the coast have a right to make a living.

And the other thing I think you would lose, is, I guess, what I would call an honest broker role that NOAA serves through its scientific information; which is derived apart from any regulatory action that we might consider.

One of the things we like about this is that we are free to pursue the data acquisition, the analysis and the science, without worrying about what regulatory activities we are going to undertake. We provide that information to the Environmental Protection Agency, and then they move forward on those conclusions.

I think you get an intellectually better product that way—a more honest product.

Senator KERRY. Well, in 1970, during the reorganization plans, EPA and NOAA were created as very distinct agencies. And you have rightly cited that NOAA monitors the oceans and the atmosphere, and improves the management of those related resources. It is management-oriented and monitoring-oriented.

EPA, obviously, has the mandate to reduce pollution and improve environmental quality. Now, in the last few years, there seems to be a trend towards duplication. I mean, you have just mentioned EPA's monitoring and assessment program and the trends; you know, you have got the EPA monitoring assessment, you have got NOAA's trends and status.

So, what is the difference between those programs? Why do you need them both?

Mr. MAGINNIS. The bulk of that on the coastal areas is contracted from EPA to NOAA, in terms of the actual work.

Senator KERRY. Do you want to comment, Ms. Hanmer, on the relationship, the duality, and about the proposal to switch?

Ms. HANMER. I think that the relationship has actually gotten a lot better in the last few years. Through much of the 1970s, we were really focused on our point-source pollution control mission, writing technology-based requirements. And the environmental information did not really have as much of a use in our program as it does now.

Once we got through the technology-based era, we sort of looked around said, well, water quality standards, aquatic habitat, these are the issues we have to take into account.

We have been actually trying to use the NOAA data. The water-monitoring needs are so vast and the needs for dealing with non-point sources are so vast for us that our motivation, really, at this point, is to use anybody we can. This is much larger than anything the Environmental Protection Agency can do.

And so where there are agencies doing anything that is environmentally related, our job is to enroll them, mobilize them, support them, and use them as part of this larger mission. That is what we have done. We have just put out of our mind the idea that we would ever be able to do it all ourselves.

Mr. MAGINNIS. I would like to add that in the past, we have not felt the same sense—or the prior Administration did not feel the same sense of urgency that this one does. Like anyone who moves into a chair behind his predecessor, you do not like to get tarred with the errors of your predecessor; you would like to take credit for his successes.

Senator KERRY. Well, let me come back and revisit this a little bit. I have to go over to the floor. We have a vote on the Agent Orange bill, and I am the principal sponsor of this bill. There is a motion to table it, and I do not want to see my bill tabled. So, I am going over there, if you will permit me to, and we will recess until the close of this vote. Then I will return immediately, and we will resume the hearing.

We stand in recess.

[Recess.]

Senator KERRY. The hearing will come to order, and we will try to proceed forward as expeditiously as possible here.

Just before we were interrupted we were discussing the relationship between NOAA and EPA. Let me ask this question, first of all, is there something more that we ought to be doing immediately in terms of the CZMA and my so-called improvement act? Is there more that we should be doing right now that could address this question of the relationship and particularly of the land use portion?

Ms. HANMER. I think the very fact that you have raised it in this context certainly has stimulated our interest in getting together with the coastal zone management agencies. In fact, for the Workshop I mentioned earlier, we are going to take your bill and Congressman Studds' bill and talk through how would they work, what would they mean, what could we do differently or better.

Senator KERRY. The workshop is when?

Ms. HANMER. We are having a workshop between the coastal zone managers and the National Estuary Program managers in November.

Senator KERRY. If there is a way for you to give us a sense of how we can strengthen that process prior to that, I think it would be important if you could.

Mr. MAGINNIS. A November conference does not preclude us, the two agencies, from getting together and sending you some advice in the meantime.

Senator KERRY. And I hope you will do that because I would like to proceed forward in a way that we can really incorporate your thoughts and expertise—not just sort of legislate at you, but perhaps with you on this in a way that could be constructive.

This is imperative. I mean, the land use piece has got to be integrated. If we do not do that, we are fooling ourselves.

And the governors all said that, when they were here the other day. You know, Jerry Baliles and the others were very adamant that this land use piece is a critical component of their ability to get a handle on their estuary and bay problems.

Mr. MAGINNIS. The present act, of course, if you have a conducive atmosphere, as you have, for instance, in Oregon, the act is adequate. The issue is you do not necessarily have a conducive atmosphere.

I agree your bill already calls for a stronger link between state water quality agencies and the coastal zone management agencies. And I think to identify those issues that directly should be addressed in the coastal zone management plan would be—those environmental issues would be a very useful step.

Senator KERRY. With respect to your testimony, Mr. Maginnis, you suggest we ought to be more focused through CZMA on the wetlands issue and particularly on the President's no net loss proposal.

A lot of the states are working to meet that goal. Is there anything we can do to strengthen that particular effort on the wetlands and the no net loss?

Mr. MAGINNIS. There are provisions in there. There is the ability in the Coastal Zone Management Act. This often comes down to the issue of mitigation and how we can afford it.

I am a little concerned about mitigation banking because it is an awfully nebulous concept, but mitigation restoration, mitigation after the fact is certainly a useful concept to try and ameliorate the effects of habitat alteration. Obviously, habitat that has been created through mitigation cannot have the same characteristics of one that has been destroyed through habitat alteration, but it is better than doing nothing.

Senator KERRY. Is there too great a flexibility in the CZMA approach right now? Should we look at making it perhaps a little stricter, a little more demanding, more rigid?

Ms. HANMER. From my perspective I think that a clearer mandate—that coastal zone management is about environmental protection—is necessary.

Mr. MAGINNIS. I think from my perspective stronger provisions on the issue of land use planning would be useful.

Senator KERRY. Why, Mr. Maginnis, do we keep getting this zero funding of the CZMA process?

Mr. MAGINNIS. I think in the first place you have not had and, in fact, still do not have a Bush team at NOAA, and we have not had a Bush team review of the whole issue of coastal zone management.

Senator KERRY. I take it that means with a Bush team review we are not going to see zero funding?

Mr. MAGINNIS. I cannot swear to that, but I can say this: I see a renaissance in this, and it is a renaissance I have been trying to promote since I arrived last August. That renaissance is evidenced by the fact that the Secretary of Commerce, when confirmed, had three priorities. Two of them were trade-oriented, but the third priority was the nation's coastal areas.

The NOAA administrator-to-be, Dr. John Knauss, as a member of the Stratton Commission, headed the subcommittee that fleshed out the Hollings coastal zone concept. So, you have one of the forefathers of the Coastal Zone Management Act. You had for the last seven years an administration within the Coastal Zone office that was not comfortable with the act as written, was not comfortable with what it was trying to do. They are gone.

And, as I say, we have a reauthorization review process that has just begun and will be continued under this new team that I feel is going to make a difference in how NOAA looks at the Coastal Zone Management Act.

You have had a very difficult time with this act over the last seven years. I would not want to tell you that has not been the case, but I think the pieces are falling into place. In a matter of days Dr. Knauss will be confirmed, I assume. It is a different kind of team. And speaking just for myself, I will be moving from NOAA's National Ocean Service to its headquarters over the next few weeks.

I handled environmental issues for Mark Hatfield for four years. I was the Director of the National Coastal Resources Institute for three years. I was the Director of NOAA's office of Policy and Planning for three years. I was actually—I wish Senator Stevens were here—a boatman for a wilderness guide in Alaska working on the Chilikadrotna and Mulchatna Rivers. My family owns a house on the beach in New York.

I am more typical of the kind of people that are coming in, people who have a history in this area and people who have an interest.

Senator KERRY. I am delighted to hear that. I hope our president hears that wherever he is. It is good to have people coming in there that are sensitive to what they are supposed to be doing there. And your definition of renaissance may be other people's definition of real politics or political reality as it may be, but I am delighted with whatever happens. We certainly look forward to a response, which is the important thing.

I think it is important probably not to look back but to look forward here, and to get the process moving as rapidly and as effectively as we conceivably can.

I am going to leave the record open for additional questions for both of you for an appropriate period of time. We will leave it open for one week and then possibly submit some additional questions in writing. It is getting late, and we have another panel waiting, and I would like to proceed to that if we can. Thank you so much for your testimony and for pointing us in those directions.

And, again, please if you could work with staff and get to us some concrete thoughts on that relationship on the land use piece because it is my hope that we can move forward with this sometime after we get back. Thank you very much.

If we could ask our panel of coastal managers to come forward, and I thank them for their patience.

We have Dr. Wayne Beam, the Director of the South Carolina Coastal Council, Dr. Sarah Taylor, the Executive Director of the Chesapeake Bay Critical Area Commission, and Mr. Armando Car-

bonell, from the state of Massachusetts, the Executive Director of the Cape Code Planning, Economic and Development Commission.

I am delighted to welcome each of you here. I know that in each of your areas you have been particularly successful. We asked you to be here really to serve as examples of model programs of what can be accomplished. And I want to thank you again for waiting patiently. If you wish to summarize your testimony, you may do so, and we will place full statements in the record as if read.

Dr. Taylor, do you want to begin.

STATEMENT OF DR. SARAH TAYLOR, EXECUTIVE DIRECTOR, CHESAPEAKE BAY CRITICAL AREA COMMISSION, ANNAPOLIS, MD

Dr. TAYLOR. Senator Kerry, thank you very much. I am Sarah Taylor, and I am Executive Director of the Chesapeake Bay Critical Area Commission. The Commission was created in 1984, as an independent agency of the State of Maryland.

The objective of the Commission was to take a look at a specific area of shoreline in Maryland, known as the "critical area," which is, in essence, a thousand-foot strip of land from the Mean High Water Line of the tidal waters in the State, the tidal waters themselves, and the land under the water.

The purpose of this Commission was to establish standards, or criteria, that would direct growth and development along this thousand-foot strip, keeping in mind that three goals were necessary to be met: 1) the minimizing of impact from water quality, 2) the conservation of habitat-fish, wildlife, and plant habitat; and 3) recognizing that growth will occur along the shoreline but that as growth occurs, there will be an impact simply because of the additional numbers and movement of people along the shoreline, through their various activities.

Maryland is dealing with and used the critical area concept to deal with its coastal pollution, its wetlands, and its habitat, and the framework of the criteria that the Commission developed has basically been directed toward land use and land use impacts.

The criteria passed the State General Assembly in 1986, whereupon the Department of Commerce, NOAA, Office of Ocean and Coastal Resources Management amended the Maryland Coastal Zone Management Program, and we became a part of that program.

I also would like to digress and say that for five and a half years prior to my being Director of the Critical Area Commission, I was Director of the Coastal Resources Division in Maryland that administered Maryland's Coastal Zone Management Program.

Standards can be set. Standards can be established that in essence provide the drumbeat for local jurisdictions to walk with to develop very specific programs geared at land use, geared at growth, geared at protection of habitat, and geared at water quality, and coastal pollution. It is happening in Maryland.

I am not one to sit here to say to you that a thousand-foot strip does it all. It clearly does not. But what the thousand foot Critical Area Program does do is, in essence, ensconce what you are trying to do, Senator, with your legislation.

I was particularly tickled to read that legislation and to see the statements in there with respect to land use. I was particularly pleased to see in the legislation broad parameters, but necessary ones, which were not in the original Coastal Zone Management Act, but which are intended as amendments; that is techniques such as buffers, such as setbacks, such as asking states to look at different measures and ways in dealing with the protection of the resources and in dealing with coastal pollution.

This is very similar to what happened in Maryland under the Critical Area Law. The General Assembly set out 11 guidelines that the Commission had to work with in developing its standards for the local jurisdictions, and these guidelines were not surprising: buffers, setbacks, establish percentages for the clearing of trees, establish criteria for the location of water-dependent uses, not just provide for water-dependent uses, but where would you put them if you had to put them somewhere, and what would those standards be.

I can see in your legislation the facets and the movement toward getting a bit more precise toward fine-tuning the Federal Coastal Zone Management Act, and that is really what is needed.

The State of Maryland has had and has been in the fortunate position to be able to pull technical expertise both from EPA and NOAA. As Ms. Hammer mentioned, when it comes to dealing with coastal pollution and water quality, she pulls in anyone who she possibly can because the problem is bigger than just one agency. Well, I can support that.

The State of Maryland, along with Senator Robb, the Commonwealth of Virginia, and along with the Commonwealth of Pennsylvania and the District of Columbia did that. If it were not for EPA and NOAA, we would not have the water quality sampling and the water quality analysis going on in the Chesapeake Bay that we do. If it were not for the initial funding under the Coastal Zone Management Act administered by Commerce, we would not have had the ability to begin to assess our resources early on as a state; beginning with 1978 providing grants to local jurisdictions to enable that to happen and to enable them to do it.

I guess what I am saying is there is benefit from both agencies in the administration, and there is technical expertise and experience in both agencies that states absolutely need and require.

It has often been talked about that federal government now "hand over the baton" to states, and that States bear the burden of handling coastal issues. I must say that unless we can stop the American public's desire to live by, use, and enjoy the coastal resources in this Nation we have no other recourse but to have a National coastal resource policy. National policy a is a priority. National policy is a necessity. And I do not see that ever ceasing to be.

I do see, however, ways in which the Coastal Zone Management Act can be fine-tuned. First of all, I suppose if I were looking at things, I would ask for an assessment to be done as to how states have been effectively working under the existing Coastal Zone Management Act. I would check to see where States' were carrying out their mission in a weak fashion, and I would address and include those resources, together with merging issues such as sea level rise, in the amendments to the FCZMA.

I would then start taking a look at how we could deal with these resources and issues and would, as your bill intends to, emphasize the land, emphasize techniques and tools that states could use which seven states out of all the coastal states happen to be employing in very forthright and imaginable and effective coastal zone management programs.

Second, whatever effort is undertaken with respect to improving the Coastal Zone Management Act, it must include efforts that mandate action down to the local level. For so long we have had federal government developing policy, state level government developing goals and management programs, and local government making the decisions, because it is at the local level where planning and the zoning resides and where the decisions are made.

So, I request in your consideration that as the amendments to the Coastal Zone Management Act continue to be made, and continue to be suggested, that we keep in mind that the decision-making power is at the local level, and what is done must be directed to that level through the states.

There has always been a fear of the unknown, of the state usurping local government power, or of the federal government usurping state power. This is something that has gone on for years. However, by carefully defining the roles a land use element to the law can work, and I think it needs to be done and needs to move forward.

The third suggestion I would make is that we also need a directive toward acquisition of land because as growth continues and as people want to use our coastal resources, we will find that there are prime resources that need to be protected and maintained. There are different ways of maintaining these resources but one of the tools is through acquisition.

I believe that the Coastal Zone Management Act needs to direct states to develop procedures or a program for acquisition of prime resources in their coastal area through which not just federal funds are to be applied, but state funds, local funds, and private sector funds as well.

And finally I would say this. In administering the critical area program, we have found that we are primarily a planning and enforcement agency. That is the approach that we take. And when projects come to us, these projects then are fit into that framework, into that plan of land use and growth management.

We are finding that some federal agencies can deal very well in that realm in that they recognize that states and local governments have enforceable land use plans. There are other federal agencies, however, that cannot deal in that realm and tend to make decisions on projects on a project-by-project, case-by-case basis.

And so, I would ask for consideration, particularly with water quality, section 404 of the Clean Water Act, Fish and Wildlife and their authorization, the Endangered Species Act, to expand their flexibility and their power to be able to recognize and to deal with planning and enforcement using comprehensive approaches at the state and local level so that all of us can begin working in tandem and in harmony to see that the end result is met; cleaning up our coastal waters.

I would like to conclude by saying that Maryland's program is not the panacea, but it is a program that started in 1984 and it is working, and it is gaining acceptance. We are seeing changes in development as projects come in to us. We are seeing counties competing to get their agricultural interests to complete Soil Conservation and Water Quality Plans by a deadline that was mandated in the critical area program criteria.

We are seeing a reduction in non-point source pollution because of specific buffers that the State has set for certain land use activities to pay heed and attention to. And we are seeing innovative financing measures taking place. We are seeing counties instituting fee-in-lieu of programs. If they cannot plant trees according to the formula under the criteria, then they exact fees. Some of them are not required to, but some have come into adopting programs of this nature requiring fees from development so that these monies can be set aside for resource aquisition and for areas in need of reforestation, whether they are in the critical area or in the watershed above the critical area.

Maryland has administered, for a long time, three programs which have helped to enhance this effort. One is called Program Open Space. It is a transfer tax. It is a tax on transfer of property, and these monies go to the State government and lands are purchased, particularly along the Chesapeake Bay to preserve their resources and to manage them.

There is also a Waterway Improvement Fund which is a tax on the gas that is purchased, as well as a transfer tax on boat title and license. These funds are being used to help local jurisdictions plan for the adequate location of water-dependent uses. And there are just a whole number of other things that can be done.

But I would like to conclude by saying that the Coastal Zone Management Act as it was originally designed is an excellent one. It needs to be fine-tuned. It does not need to be changed in its entirety. We have the regulations, we have the laws. It would be nice to see the law include land use and set out specific, as well as general standards that states can use to move forward in this effort.

I want to thank you very much for inviting me to be here and to present Maryland's opinion and ideas, and we look forward to working with you as you continue to consider these amendments. Thank you.

[The statement follows:]

STATEMENT OF
SARAH J. TAYLOR, Phd., EXECUTIVE DIRECTOR
CHESAPEAKE BAY CRITICAL AREA COMMISSION

to the

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

and the

NATIONAL OCEAN POLICY STUDY

August 3, 1989

Mr. Chairman, and Members of the Committee, thank you for your kind invitation to speak today before you. My name is Sarah J. Taylor, and I am the Executive Director of the Maryland Chesapeake Bay Critical Area Commission.

The Critical Area Commission was established by Law in 1984. It is an independent agency of State government, with the primary function of coordinating and regulating the actions of local governments and State agencies along the tidal shoreline of Maryland's portion of the Chesapeake Bay and its tidal tributaries. In August of 1987, by amendment, the Chesapeake Bay Critical Area Commission, along with its Protection Program, became recognized and included as official elements of Maryland's Coastal Zone Management Program.

Maryland established this Commission and Protection Program to protect the water quality and the habitat of the Bay, because it was recognized that the declining health of the Bay would not be able to be reversed if the intensity of human activity throughout the Chesapeake Basin continued to increase. This conclusion was reached knowing that there are existing Federal and State point source and non-point source laws and programs as well as existing Federal and State resource restoration and enhancement laws and programs. The five year Congressionally-funded and endorsed study of the Chesapeake Bay by the U.S. Environmental Protection Agency supported that conclusion.

Maryland's Critical Area Program is a bit unique because even though its focus is only on the tidal water of the Bay, on the land under the tidal waters, and on upland within 1,000 feet of the tidal waters, it represents the first time in Maryland's history that a State-mandated local government land planning and enforcement effort was viewed as essential for the well-being of Maryland's coastal resources.

THE INTERPLAY OF MARYLAND'S COASTAL ZONE MANAGEMENT PROGRAM WITH COASTAL POLLUTION, WETLANDS AND HABITAT PROTECTION, AND SEA LEVEL RISE

In 1978, Maryland's Coastal Zone Management Program was approved by the Department of Commerce, National Oceanic and Atmospheric Administration. In implementing its Coastal Zone Program, Maryland recognized the need to establish baseline information on certain coastal resources to supplement its existing protection

program for tidal wetlands established by the 1972 Wetlands Law. From 1978 through 1986 sixteen counties and Baltimore City began to use their Coastal Zone monies to map and inventory resources, for example, non-tidal wetlands, natural heritage areas, fish spawning streams, shellfish beds, and special management areas to receive special protection or management consideration. Coastal Zone monies were used by State agencies to address the improvement of stormwater management practices for development, best management practices for agriculture, and floodplain measures to protect existing and new development. Sea level rise was also addressed, but with a focus on the ocean resort of Fenwick Island, known as Ocean City, Maryland. Management studies were performed focusing on dredge material placement, wetland regeneration for mitigation, and improved public access.

While the Maryland Coastal Zone Management Program afforded the opportunity for inventories, maps, and management approaches to be addressed by local and State agencies alike, there was no framework upon which these approaches and studies could be applied and used on a consistent basis. Furthermore, the Maryland Coastal Zone Management Program focused most of its attention on water-related activities. Little attention was paid to the impacts that different types of land uses were having on water quality and habitat of the Bay. In fact, over those several years, the following trends had become established:

1) farm and forest land (prime habitat areas) had been used up at a rate of over 9,500 acres per year;

2) land had been converted faster than population growth, meaning that the amount of land being used per capita had increased;

3) low density sprawl had been shown to be the major cause of loss of farm and forest land. Residential uses accounted for 90% of the increase in urban and suburban land;

4) seventy percent of the State's growth had occurred in areas not planned for growth, but rather had intruded in areas designated for rural, agricultural, conservation, preservation, or similar purposes.

Consequently, in 1984, based upon the results of the Environmental Protection Agency Study mentioned earlier, Maryland, along with its neighboring states enacted that much needed framework known as the Chesapeake Bay Critical Area Protection Program in consort with 27 or so other Bay Cleanup Initiatives. This was furthered by an Agreement on the Chesapeake Bay signed in 1987 by the same respective parties.

Under the Critical Area Law, the Commission was required to develop criteria for local jurisdictions to use in creating local Critical Area Protection Programs. These criteria were promulgated in December 1985, and approved by the General Assembly in 1986. They were based on three goals specified in the Law:

1) manage adverse impacts on water quality that result from pollutants discharged from structures or conveyances that have runoff from surrounding land;

2) conserve, fish, wildlife, and plant habitat;

3) establish land use policies for development in the Chesapeake Bay Critical Area that accommodate growth and also address the fact that even if pollution is controlled, the number, movement, and activities of persons in that area can create adverse impacts.

The Commission's criteria vary in their specificity. Some require design and performance standards to be included in local regulations. Others require local jurisdictions to develop strategies to address well-documented problems such as the quality of urban stormwater discharges. Through collaborative planning, which is specified in the Law, jurisdictions are to use these guidelines in developing or modifying local regulatory programs, such as zoning ordinances, general development plans, subdivision regulations etc..

The Law includes a schedule for local Program development, for Program approval by the Commission, and for implementation by local jurisdictions. All jurisdictions must implement Programs by June 1988.

There is also a management strategy that accompanies the Commission effort. It has three major themes: land use management, conservation of ecosystem function and diversity, and State/local government coordination. Each local government must translate this strategy into a local management program for the Critical Area within its political boundary. The first step is the requirement of inventories or maps of the following resources: agricultural land, non-tidal wetlands, tidal wetlands, forest resources, sand and gravel resources, tributary streams, specific plant and wildlife habitats, steep slopes, and soils with development constraints. Most of these resources were previously mapped through the use of Maryland Coastal Zone Management grants to the counties as mentioned previously.

The second step was for local jurisdictions to classify the land in the Critical Area into one of three categories: Intensely Developed Areas, Limited Development Areas, and Resource Conservation Areas. Generally, Intensely Developed Areas are urbanized ones; Limited Development Areas range from suburban to rural residential areas, and Resource Conservation Areas include forests, agricultural land, and wetlands.

These land use categories are significant to the local Program in the following ways:

1) Each category has different management requirements, allowing the classification process to define the spatial location of different future management practices. For example, in Intensely Developed Areas, forest management objectives promote urban forestry programs emphasizing street tree management, tree planting in community parks, and private landscaping efforts. In Resource Conservation Areas, local Programs preserve and enhance forest resources by requiring management plans prior to harvesting, requiring compensatory reforestation after

clearing, and providing incentives for reforestation.

2) The areal extent of Resource Conservation Areas within a jurisdiction determines new growth areas (whether Intensely Developed or Limited in nature) that can be planned within existing Resource Conservation Areas. The amount is determined by a formula in the criteria. The formula limits the ability to expand or create more shoreline development in those jurisdictions with extensively developed shorelines than in those with rural shorelines. The formula also encourages the redevelopment and revitalization of existing communities rather than allow intense development to sprawl along the shoreline.

By determining the location and extent of natural resources and human activities, local Programs can maximize the benefits from both urban and rural uses of the Bay's shores. Once growth is used up, no further development can take place along the shoreline.

The Commission's criteria for water quality management include both preventative and corrective measures for reducing the impacts of non-point source pollutants. The Commission's strategy includes directives to be applied throughout the Critical Area and particular guidelines for land use in each land classification (Intensely Developed Areas, Limited Development Areas, and Resource Conservation Areas).

To manage water quality, the Commission has identified three objectives that apply throughout the Critical Area. The first objective is reinforcement and expansion of State programs for sediment control and stormwater management. These programs are designed to be delegated to local jurisdictions if certain standards are met.

The second objective is to conserve or enhance the forest resources within the Critical Area for water quality benefits. Because forests generate lower rates of sediment and nutrients in runoff than other land uses, their widespread conversion in urban areas has contributed to the non-point source pollution problem. Because conservation of the land and water interface is so vital in water quality management, the Commission requires watercourses, shorelines, and non-tidal wetlands to be buffered by strips of natural plant communities throughout the Critical Area. Existing development within these buffers can remain, but local jurisdictions must undertake compensatory activities.

The third area-wide objective is to require that Soil Conservation and Water Quality Plans be implemented on all farms. These Plans prescribe best management practices for soil, water, fertilizer, pesticides, crop residues, and animal husbandry to reduce offsite impacts. Accomplishment of these three objectives will minimize the non-point source pollution generated in the Critical Area.

Additional criteria for managing water quality impacts are good examples of how classifying land into management units directs the local jurisdiction in solving relevant problems. For example, in Intensely Developed Areas, the sources of pollutants are different than those in rural areas. The Commission's objective in Intensely Developed Areas is to correct problems and

restore natural systems to the extent possible. Consequently, the criteria require that local jurisdictions address urban non-point sources of pollution by establishing urban forestry programs and by landscaping. They are also required to reduce impervious areas and to apply necessary technological solutions. In particular, redevelopment projects in these areas are required to improve incrementally the quality of surface runoff.

In Limited Development Areas, the goal is to protect those parts of natural communities that contribute to good water quality while allowing limited development to occur. Local Programs accomplish this by minimizing the area disturbed by development activities; limiting the impervious area to 15% of the site; reducing road standards if safety is unaffected; prohibiting development on steep slopes; limiting forest clearing; and requiring replanting of all cleared forests.

The causes of pollution in Resource Conservation Areas are generally different than in Intensely Developed Areas and Limited Development Areas. Water quality in these areas will be conserved and improved by maintaining or increasing the acreage of forest cover and by requiring all farms to implement a Soil Conservation and Water Quality Management Plan. The low density development allowed in Resource Conservation Areas (one dwelling unit per 20 acres) must adhere to the standards prescribed in the Limited Development Areas.

By classifying the Critical Area into management classes, the uniform regional criteria for water quality management can be relevant to each of the local jurisdictions around the Bay.

The Critical Area Law also directed the Commission to establish program development criteria to conserve fish, wildlife, and plant habitat. This directive is fairly unique among wildlife laws because it formally recognizes that habitat conservation is essential to species conservation. The task of the Commission was to select those fish, wildlife, and plant habitats that should be considered for protection by the Critical Areas Law.

The Commission identified four classes of species in need of protection. The first class includes those species directly dependent upon the aquatic habitats in the Chesapeake Bay and its tributaries.

The second class comprises species that are highly susceptible to isolated disturbances because their habitats are rare, their occurences are rare, or as in the case of colonial water birds, they congregate to breed in relatively few places, at which time regional breeding populations become vulnerable to disturbances. Loss of these habitats can mean a significant loss in regional biological diversity within the Chesapeake region.

The third class includes species that are seasonally absent from the Chesapeake Bay region. For example, certain waterfowl winter on the Chesapeake; neotropical migratory birds breed there. The criteria require persons who make land use decisions to consider the seasonal dependence of these species upon local habitats.

The fourth class is composed of species threatened when their habitats are

fragmented and isolated by land use changes. Historically, urban development and agricultural land uses have replaced large forested areas in the Chesapeake region. If past and projected land use trends continue, large forested areas will become increasingly scarce in the coastal areas of Maryland. These trends have contributed to insidious declines in populations of birds that require large forested tracts for successful reproduction. Research in other locations suggests the habitat fragmentation affects plants and other wildlife.

Each of these four habitat types is essential to the conservation of regional biological diversity, but each is threatened by daily, cumulative land use decisions on the part of local governments and citizens along the Bay shoreline.

STRENGTHENING THE FEDERAL COASTAL ZONE MANAGEMENT ACT - RECOMMENDATIONS

While it may sound like Maryland has addressed the pollution, wetland and habitat issues in an admirable fashion, I can assure you that it is just a beginning. In fact, along the way, we have discovered that a little fine tuning of our own programs along with a little fine tuning of the Federal Coastal Zone Management Act could enhance the overall comprehensive effort needed to address issues of coastal pollution, wetlands and habitat protection, and sea level rise.

#1 There is a need to integrate Federal regulatory programs for coastal resources with coastal zone management. The Coastal Zone Management Act has encouraged states to make long-term decisions about coastal protection and development. Unfortunately, Maryland's as well as other state efforts have been frustrated by a combination of Federal laws that are applied incrementally, on a case-by-case, project-by-project basis that seldom give recognition or weight to decisions made by states in their coastal zone management programs.

Several Federal laws or regulations, including those which implement Section 404 of the Clean Water Act, the Fish and Wildlife Coordination Act and the Endangered Species Act, need to be modified so that Federal agencies exercise their considerable authority in a comprehensive planning mode as well as through review of specific projects.

The strength and heart of the Coastal Zone Management Act is that it encourages states to take a long-term view of their coastal zones and their coastal resources. It has encouraged stated to consider the long-term effects of continued development on fragile resources. It has encouraged states to make decisions about which areas are most appropriate for development and which are not. And, several states have responded. Unfortunately, state efforts to make long-term decisions designating areas for development are hampered by the inability or unwillingness of Federal agencies to commit to development decisions in advance. Federal regulatory agencies are often unable to sign off on plans requiring environmental review solely through case-by-case, project-by-project review procedures. These Federal programs do not provide authority for long-term planning and commitments by Federal agencies on designating areas for development. Even where there is authority for planning or commitment, there is often a bias against planning.

Perhaps there should be an examination of Federal actions, policies, programs, and permit processes, to see what changes can be made, because as a result

of current practices of review there is no consistent approach to dealing with habitat areas or coastal pollution and the like.

The reason for changing these programs is not to weaken or reduce their standards rather, it is simply to reorient their application from regulation alone to a two-step system of planning and regulation. Each of these laws should provide for the administering agency to sign off on land-use designations made in the coastal zone management programs of the various states. Such an approval process should reserve decisions about impact minimization and mitigation to a regulatory review.

#2 There should be a way to strengthen the Act so that it provides standards that are substantive for measuring the effectiveness of state coastal management programs in addressing the goals of the Coastal Zone Management Act. We ought to be able to document the inadequacy of state programs to protect specific resources or manage particular types of development, and develop specific national standards for those resources or uses. There should be flexibility in allowing states to come up with demonstrable ways and effective approaches in addressing these resources etc. Federal regulatory programs should be meshed with those standards.

The Coastal Zone Management Act could easily be strengthened to further encourage planning for broader protection of undeveloped rural areas and proper planning for urban development. For example, states might be required to identify urban and rural areas for the purpose of targeting state and Federal spending on infrastructure improvements. By identifying urban and rural areas in coastal zone plans, states and Federal agencies could target funding to urban areas and reduce incentives for inappropriate development.

#3 The Law should mandate a partnership between local, state and Federal agencies. This is important because resource policies have usually been fostered at the Federal level, management responsibility has usually occurred at the state level, and land use decisions have usually occurred at the local level. This is disjointed. A mandated partnership would help bridge the fragmented approach. The existing Law does not mandate this partnership.

#4 Federal, state, local and private agencies should be directed to focus their acquisition and easement programs on resources that need protection such as: wetlands, habitat areas, and in limiting development in areas that will be unsafe in the future for habitation (areas subject to sea level rise), or which are currently contributing to coastal pollution, and for which no remedy has been sought.

Coastal zone management has been a successful program so far. It is time to fine tune the program to address in a more comprehensive and predictable way the current and future use of our coastal resources. I am encouraged by your efforts to continue to refine the Program and to maintain its effectiveness.

Senator KERRY. Thank you very much.
Dr. Beam.

STATEMENT OF DR. WAYNE BEAM, DIRECTOR, SOUTH CAROLINA COASTAL COUNCIL, COLUMBIA, SC

Dr. BEAM. Thank you. I appreciate the opportunity to present views on this topic. I would like to thank you also for your efforts in this area as evidenced by Senate bill 1189. I think you are headed in the right direction. From my conversations with other program managers around the country, I believe you are headed in the right direction.

I would like to give you a couple of cautions. I think for your bill to succeed, if enacted, there are a couple of things which will have to change. One of them is NOAA leadership, and you alluded to this earlier.

Mr. Maginnis asked us to wait for the Bush team. I submit that we should wait for any team other than the one that we have had to provide some leadership. And for the last decade we have labored under this problem of no funds, zero budget, and it has been a problem. We do appreciate the efforts that you and the other members of Congress have displayed in giving us the funds to adequately, hopefully, run these programs.

I would like to say a word about the office of Coastal Resource Management; I have high praise for them. They have labored under this cloud over there, and they have been quite helpful to the states.

The other issue is money. We are operating in South Carolina now with about 15 percent less federal money than we had two years ago. We are facing more and more problems.

Our growth rate in South Carolina's coastal zone is quite torrid. It is a national problem. It is not a problem that, as the old administration said, the states should take on themselves. We cannot do that.

South Carolina has a total state budget of $3 billion. We cannot assume all the responsibility for implementing a program that has nationwide significance.

We are very proud of the program we have in South Carolina. We are working very diligently in beachfront management. As a matter of fact, we have some cases going before our state supreme court to see whether we have been too diligent in dealing with the issues of shoreline management and storm water management. We are working with new golf course designs in our state. We are going to be working, hopefully, with the USGA on implementing some organic fertilizing programs and to rid us of some pesticides and some of these synthetic fertilizers that are causing water quality problems.

And I think we have as aggressive a program as there is in the country now addressing fresh water wetlands, especially the isolated wetlands above the headwaters of streams.

I know there has been some talk and the President has even alluded to this no net loss theory, and that is fine. If we are going to allow golf course lagoons to count for the same habitat value as vegetated wetlands, we can give you no net loss. We can start on that today. But at some point in time, these agencies are going to have to decide are we going to give credit for people making these ponds? Are they going to have the same value and credit as people who have left intact vegetated wetlands.

So, I would just caution the members of Congress who are looking at that issue. We can give you a no net loss scenario, but it may not be what you are looking for.

I point out these things that we are doing in South Carolina that are clearly over and above the basic requirements of the program. We are doing it in spite of the lack of leadership from the administration, and we are doing it in spite of the lack of Federal financial support.

We would leave you with those two comments. As a brief comment about the NOAA/EPA linkage, we realize there is a problem there, and we would like to see this Committee and others work on

defining once and for all what role both of these agencies would play.

We believe the problem is large enough for everybody to be involved. That old adage is still true that it is amazing what you can accomplish if it does not really matter who gets the credit. I think it would probably make a lot of difference in this scenario if we got cooperation from these 2 Federal agencies.

I think in order to help that linkage I would submit that maybe the clean water programs should be subjected to a CZMA section 312-type review just as we have in the coastal zone management program. It would certainly open up some of those programs to critical review and acclaim from the public, and I think it has done a lot for our program in South Carolina.

I would submit that it would do a lot for the clean water program. It would do a lot for the public's perception of the clean water program and what it is doing for coastal water quality.

That is just something I leave with you. That is really the basis of the comments I wanted to give you.

I have submitted something for the record.

[The statement follows:]

Testimony of Dr. H. Wayne Beam
Executive Director, South Carolina Coastal Council

before the Senate Committee on Commerce, Science and Transportation

9:30AM, August 3, 1989
Room 253, Russell Senate Office Building
Washington, D. C.

Mr. Chairman, and other distinguished members of the Committee.

I appreciate this opportunity to present my views on how the Federal Coastal Zone Management Act may be used to address natural resources problems facing this nation. South Carolina has enjoyed the benefits of a Federally approved program for 10 years. We are certainly much better equipped to handle the problems at hand in South Carolina because of this federal-state partnership made possible by the Coastal Zone Management Act.

Mr. Chairman, I truly appreciate your concerns for coastal resources as evidenced by your proposed S1189, the Coastal Zone Improvement Act of 1989. We in South Carolina support your efforts to afford additional tools for states to manage the negative impacts of continued explosive development of coastal areas. However, we would sound a word of caution as you consider enactment of new laws. The custodians of our nation's coastal resources must demonstrate to the public they are properly utilizing existing laws before being entrusted with additional authority.

I broach this topic only because several environmental organizations have related to me their perception of the Federal environmental establishment in the Southeast. Their perception, rightly or wrongly, is that influence peddling may not be unique to the Department of Housing and Urban Development. These environmentally conscience individuals contend the federal environmental network would appear to operate on the honor system; people who can buy influence are honored with necessary development permits while the less well connected get the "system". I submit this perception can only be overcome by better public accountability from those who administer these programs. The public will demand strict adherence to environmental statutes which insure clean coastal waters if they are informed of the options. A good first step in getting this involvement would be to require a Coastal Zone Management Act Section 312 type review for all programs under the Federal Clean Water Act. This process has served us well in implementing South Carolina's coastal management program. This review, as required under the Coastal Zone Management Act, sometimes has the refreshing effect of publicly embarrassing officials into resisting political pressure and doing the right thing.

The environmental community has also observed the increasingly popular trend of Members of Congress eagerly voting for new environmental initiatives on one hand while on the other playing the fiscal conservative to constituents and voting against the funding required to properly implement the program. The current Coastal Zone Management Act is a good example. We in South Carolina could better address the problems of wetlands protection, stormwater runoff, beachfront management and the myriad of other problems

brought on by continued development of our coast if we were provided adequate funding. The 12.3% cut in federal funding we have experienced in the last 2 years is no way to insure coastal resources will be in any shape to be enjoyed by our children and grandchildren. We would be delighted to compete for additional monies over and above our basic Section 306 allocation which could be provided to states choosing to aggressively attack coastal problems. There is no substitute for adequate funding to address these issues. Also, the concept of significant improvements exacerbates the problem of lack of funding. This requirement should be eliminated from the Coastal Zone Management Act. The noose should not be further tightened on already good programs under the guise of significant improvements.

I would also ask that you lend your support to transferring the Office of Management and Budget budget examining function for National Oceanic and Atmospheric Administration programs to the Program Associate Director for Natural Resources, Energy, and Science. The National Oceanic and Atmospheric Administration budget should be considered functionally along with the National Science Foundation and the Environmental Protection Agency. Priorities for these important scientific and environmental programs can best be set by having the same Office of Management and Budget Division examine their budget requests.

Finally, I would ask that you take a long look at the programs of both the Environmental Protection Agency and the National Oceanic and Atmospheric Administration which address coastal water quality. Your oversight must effect the required coordination and cooperation to insure there is no wasted motion in not only maintaining, but enhancing water quality in the coastal zone. There must be more guidance as to how the National Estuarine Program and approved Coastal Zone Management Programs are to interface. There is not enough time or available money to allow quibbling over turf. We have reached the point in coastal resources management where programs which produce must be Congressionally nurtured while those which would attempt to solve these problems with mere rhetoric must wither on the vine. Your active participation in assisting the states manage these irreplaceable resources is needed. To shrink from the task at hand would be to deny future generations of Americans their coastal birthright.

Thanks for the opportunity to give you my views on a matter of great concern to me.

Senator KERRY. Thank you.

Mr. Carbonell, welcome. You have put this map up here, and I see the Cape and today is Thursday before the recess and I am enticed, and I am sitting here and saying, God, let us go.

STATEMENT OF ARMANDO J. CARBONELL, EXECUTIVE DIRECTOR, CAPE COD PLANNING AND ECONOMIC DEVELOPMENT COMMISSION

Mr. CARBONELL. Mr. Chairman, thank you for the opportunity to address the committee on these improvements to the Coastal Zone Management Act.

I represent the Cape Cod Planning and Economic Development Commission, which is a county agency on Cape Cod, comprised of the selectmen of the 15 Cape Cod towns, as well as the three county commissioners of Barnstable County, and one minority representative.

The Massachusetts Coastal Zone Management program is very dear to us on Cape Cod. It was the first program on the East Coast to be approved by the Department of Commerce under the CZM Act.

And our Commission houses the regional office of Coastal Zone Management, the second such regional office that we know of in the country.

We are also very proud of some of the experiments that have taken place on Cape Cod with the cooperation of the Massachusetts Coastal Zone Management program, some of which you have heard about, and some of which we will present to you today.

Like other parts of the U.S. coastal zone, the fragile resources of Cape Cod are under increasing growth pressure. And Barnstable County, in recent years, has tended to be in the top three New England counties, in terms of population growth.

We feel that Senate 1189, the Coastal Zone Improvement Act of 1989, addresses a number of important issues that have not adequately been dealt with heretofore.

First, the revision of landward coastal zone boundaries—looking landwards to see if states have properly defined the coastal zone.

Cape Cod, Martha's Vineyard and Nantucket, we like to think of as the three great islands of Massachusetts, although I know some other great islands are dear to you, Mr. Chairman, as well.

All of the land mass of these islands is included within the state defined coastal zone. We think there are tremendous advantages to this. It makes it possible to establish comprehensive, regional resource protection and planning systems.

On Cape Cod we are experimenting, we hope soon, with a new regional land-use regulatory authority called the Cape Cod Commission Act. A similar agency exists on Martha's Vineyard today.

We believe that having jurisdiction over the proper system is essential if one is to manage and regulate that system. And if the coastal boundary does not include the tributary areas to the coast, if it does not include the land mass that is directly affecting the coast, you really cannot effectively plan or manage that resource.

Second, the concept of consistency, of federal actions that are not taking place within the immediate coastal zone, within the territorial waters of the states, but which will directly affect the coastal zone. We think this is an important provision of the bill.

For us, on Cape Cod, Stellwagen Bank, the center of Nantucket Sound, certainly, George's Bank, which lies 150 miles off the coast of Nantucket, are all outside of the coastal zone, and federal activities are not incorporated within the Coastal Zone Act consistency requirements.

We think it is very important that where such activities as oil and gas exploration, or mining of minerals in Stellwagen Bank, or other activities, could affect the immediate coastal zone, there be a consistency review.

Third, the bill contains a response to the inevitable rise in sea levels, or at least the relative rise in sea level to land height.

On Cape Cod, the Massachusetts Coastal Zone Management offices estimated that by the year 2025, we will see nearly 4,000 acres of shoreline lost to rising waters.

[The table follows:]

Acreage lost to sea level rise [1]

I own:	Acres
Barnstable	583.4
Bourne	240.5
Brewster	113.0
Chatham	163.2
Dennis	393.6
Eastham	143.6
Falmouth	600.0
Harwich	300.8
Mashpee	212.3
Orleans	168.7
Provincetown	33.1
Sandwich	188.2
Truro	96.1
Wellfleet	159.1
Yarmouth	504.7
Total	3,900.3

[1] 1980–2025, a rise of 1.57 feet. [Based on Mass. CZM estimates.]

In discussions with your staff, we estimated the value of that land to be at least in the range of a billion to two billion dollars, and perhaps considerably more.

The fourth point that I would like to bring up from the bill itself is controlling non-point sources of water pollution. We have been very concerned about shellfish closures, closures—you cited the Boston Globe article of yesterday which talked about nearly 6,000 acres closed on Cape Cod. This has inspired the creation of the Marine Water Quality Task Force, looking at the sources of such contamination and identifying ways of correcting them.

For example, correcting road drainage which is contributing to contamination. That effort has been supported by the Massachusetts Coastal Zone Management office with staff, and expertise, and it has been most helpful.

I would like to turn to three additional themes that I think might be considered as part of re-authorization of the CZM Act. The first, having to do with the integration of local, regional and state efforts, with Federal Government efforts. And, particularly, the incorporation of strong citizen involvement in that effort.

On Cape Cod, we had a very successful experience with a very serious attempt to involve citizens in planning. Prospect: Cape Cod, a strategic planning effort resulted in very large-scale participation by many people through newspaper supplements and other ways of reaching out. And, also, many, many meetings with a large number of people.

It has been helpful to us, both in discovering things that people out there know that we do not know in government, but also in engaging them in our work, and helping us to get the kind of political support that is needed for things like the Cape Cod Commission Act.

Second, I would like to talk about the integration of science into policy and regulatory decisionmaking in the coastal zone. Here we have had, I think, a very positive experience in a related area, the Cape Cod Aquifer Management Project, which I enjoyed briefing Senator Kerry on not too long ago, where a number of federal agencies, the Environmental Protection Agency, the U.S. Geological Survey, were able to work with state, regional and local governments to develop new tools and integrate them into the management process.

We are looking forward to a similar effort in Waquoit Bay involving the two towns of Mashpee and Falmouth, with the Environmental Protection Agency, the National Science Foundation and state agencies, and NOAA. This is a National Estuarine Research Reserve area recognized by NOAA to discover the science that is needed in terms of nutrient modeling and so forth, the interaction of groundwater and surface water, but also to translate that science into management tools that will be effective, and regulating the land uses that ultimately affect water quality within the Bay.

Senator KERRY. Could you suspend for one minute, sir? Excuse me for a moment.

Mr. CARBONELL. Certainly.

[Pause.]

Senator KERRY. All right, let me ask. I really am sorry to do this. We are in the craziness of wrapping up here, and so things are bouncing around. And the last time I left here, I won a vote by 90 to 8, so, if you will permit me, I am a principal sponsor of the legislation addressing oil spill clean-up.

We are on the floor right now, and I just need to go over very quickly, deal with that very rapidly and be back here.

Could I ask your indulgence, and I will try to get back as soon as I can.

So we will just recess for, hopefully, no more than about 15 minutes.

[Brief recess.]

Senator KERRY. The hearing will come to order, and again, my gratitude to all of you and my apologies, simultaneously.

That was the oil spill legislation, however, much of which came out of this committee and our work. And I think everybody will agree that that is an important effort on our behalf.

Mr. CARBONELL. Mr. Chairman, I have used the opportunity of the recess to change maps on you and simply illustrate the application of computer mapping to the coastal zone, and I will leave this behind for a closer inspection.

On the point of integrating scientific information into the decision-making process, it is very useful to do that in the context of something like a geographic-information system which we do now have available within our commission for at least part of Cape Cod—a computerized system that makes it possible to map as here, the areas of environmental sensitivity in Wellfleet, Massachusetts, including the coastal wetlands areas, the rare and endangered species habitat, on a system that also keeps track of things like the ownership patterns of property so that one can gauge the effects of different zoning changes and so forth.

On the point of scientific research, with very scarce resources in this field, we think it is extremely important that a more strategic attack be taken. That scientists be asked to focus their energies on the most critical questions to coastal managers, that the timing of research programs, as much as possible, reflect the needs for information of those in regulatory positions.

And I think it is possible to accommodate, and we are trying to do that, I think, with some success in the Waquoit Bay project—accommodate the needs of the scientists to take their time and be thorough, and not give answers that they do not have confidence

in, but at the same time, to recognize that those of us who are not scientists, also need to make decisions based on their information.

The last of the themes that I think could be emphasized more greatly within the bill has to do with the global aspect of coastal protection—the sense that we cannot be successful individually on Cape Cod or any other small piece of the coast, if the coast, as a whole, is not being adequately protected. And with the transport of pollutants over long distances to Cape Cod, as we have seen in recent years, with devastating effects, it is obvious that we really cannot rest easy, if we have a good coastal zone program and nobody else does.

But, also, on this point of the global aspect, I would like to bring to your attention the Cape Cod, Planet Earth project. I know, Mr. Chairman, that you are on the National Board of the Earth Day preparations for 1990, the Twentieth Anniversary of Earth Day.

And what we have tried to do in a small way on Cape Cod, is use the "think globally, act locally" motto, to respond to some of the things that Senator Stevens mentioned this morning—a sense of individual responsibility, of the decisions that we make at home every day that have something to do with global warming or even with the risk of oil spills to the extent that we can reduce our use of fossil fuels.

And we hope that this can be useful to you as one set of ideas as you continue the preparations for that Earth Day activity.

In closing, we see ourselves as a very small part of the coast, 586 miles of the country's coast is on Cape Cod. There are about 95,000 miles of coastline in this country, but we hope that, as we have benefited from the Coastal Zone Management Act, and from your support, that we can be of some help in terms of some of the small examples that have been developed on Cape Cod that are pertinent to this effort.

Thank you.

[The table referred to follows:]

ESTIMATED NEW ENGLAND COUNTY POPULATION GROWTH
1980-87

	Number		Percent	
1.	Hillsborough County, New Hampshire	46,100	1. Dukes County, Massachusetts	25.8%
2.	Rockingham County, New Hampshire	38,100	2. Nantucket County, Massachusetts	22.7%
3.	Hartford County, Connecticut	28,800	3. Rockingham County, New Hampshire	20.0%
4.	Barnstable County, Massachusetts	25,900	4. Carroll County, New Hampshire	17.9%
			5. Barnstable County, Massachusetts	17.5%

State and county	July 1, 1987	July 1, 1986 (revised)	April 1, 1980 (census)	Change, 1980 to 1987	
				Number	Percent
Massachusetts	5 855 000	5 834 000	5 737 093	118 000	2.1
Barnstable County	173 800	169 500	147 925	25 800	17.5
Berkshire County	139 500	139 500	145 110	-5 500	-3.8
Bristol County	478 200	474 900	474 641	4 500	1.0
Dukes County	11 300	10 800	8 942	2 300	25.8
Essex County	850 900	850 100	633 688	17 200	2.7
Franklin County	65 900	64 800	64 317	1 600	2.5
Hampden County	445 000	442 800	443 018	2 000	0.5
Hampshire County	140 500	139 200	138 813	1 600	1.2
Middlesex County	1 373 600	1 378 800	1 367 034	6 600	0.5
Nantucket County	6 200	6 200	5 087	1 200	22.7
Norfolk County	810 300	806 200	606 587	3 700	0.6
Plymouth County	427 200	421 900	405 437	21 700	5.4
Suffolk County	966 900	872 800	650 142	16 800	2.9
Worcester County	865 000	867 200	646 352	18 600	2.9

Source: U.S. Census Bureau Local Population Estimates, Current Population Reports, Series P-26, No. 87-A, issued September 1988

Analysis by Cape Cod Planning and Economic Development Commission

Senator KERRY. I thank you very much, Mr. Carbonell. I thank you for your leadership on this effort. And I think what has happened down in the Cape, obviously, in the efforts to regionalize and come up with a comprehensive strategy has been critical.

Some people say it is too late for the Cape. I don't know if you have heard those—I know you have heard those hues and cries. You are shaking your head in the affirmative. You have to have heard them because of the effort last year with the initiative and everything else.

But, what is your response to those people who say that the development has already gone too far, and that you cannot pull back.

Mr. CARBONELL. It is certainly true that we have lost a tremendous amount of value on Cape Cod, and I think we have actually brought into serious jeopardy, the long-term value of the place and its economy in a very serious way.

At the same time, we see Cape Cod as being only one half developed. According to local zoning, it would be possible to build another Cape Cod's worth of houses and shopping malls and roads on top of what we already have.

Senator KERRY. But that is what the zoning says?

Mr. CARBONELL. That is right. Now the zoning——

Senator KERRY. Which you have to underscore.

Mr. CARBONELL. Which is crazy, of course, but I guess the point is that there are plenty of bad decisions left to be made on Cape Cod that we need to avoid. And part of our goal is to avoid those decisions.

I think there is also an awful lot of hope for——

Senator KERRY. Do you think the coalition has been activated and is strong enough now to do that?

Mr. CARBONELL. I certainly believe it is. I think that the strength of the public opinion certainly has showed itself in the last year or two. I think government officials have seen the light. I think we have a program that should work, and I think we have a lot of friends in state and federal government who could help us be successful.

We are certainly going to need tremendous resources to do things like open up those 6,000 acres of closed shellfish beds, and I think the——

Senator KERRY. Well, what are the key ingredients of those resources. Can you give me a sense of that?

Mr. CARBONELL. In most cases, we are talking about very expensive reconstruction of highway drainage systems. We are talking about going into communities that have built far too many septic systems on too little land and putting in pollution control systems, which may be very expensive. A lot of engineering work.

It is not mysterious, but it is expensive to go back and redo these things after the fact and it is just something we have to find the money to do and we have to do it in an efficient way.

We have to make sure that the most valuable of these shellfish beds are actually restored. It really does no good to fix it a little bit and end up with slightly improved water quality. Again, a strategic approach seems to be needed so that we can restore area by area, based on value, based on importance.

I think some of the concepts of legislation are helpful here in terms of identifying very pristine resources that are threatened and ought to be protected, identifying areas that are degraded and need to be reclaimed, but I think some intelligent strategic thinking has to go into that.

Senator KERRY. Do you believe that developers have fully bought off on the idea regarding regional planning, or is there still resistance?

Mr. CARBONELL. There is still resistance, but there is an amazing amount of acceptance and I think the debate this year focused not on whether to have it or not—whether to accept land use controls or not—but how to work out the procedures so that they will be as palatable as possible. How to deal with issues like property rights in a way that is as fair as possible. But I think there is an acceptance that this is happening and it can be a lot more pleasant if they participate in the process in a constructive way, and we have gotten that response increasingly.

Senator KERRY. As you know, I have $35 million in my legislation as something of a hook to get people interested in the land use planning process. Do you believe that that will serve as a hook? Is it an adequate amount? Do you need more in order to do that?

Mr. CARBONELL. Land use planning is a poverty-stricken field in this country, and $35 million will appear as a significant amount of money. I am sure more would be useful as well.

Senator KERRY. What do you think are the key ingredients now to further the process of decision-making and regionalization so that we avoid those bad decisions that you have referred to?

Mr. CARBONELL. I think the first step is to assemble a base of scientific information that will provide the rationale for regulatory decision-making. We have begun to do that on Cape Cod, but a tremendous amount of work needs to be done and I think here is an where the Federal Government can be very useful.

I think despite the differences that we see from one place to another around the coast in this country, there are processes that are in common and I think the research efforts of NOAA and EPA could usefully be directed to understanding some of the processes that lead to nutrient enrichment of embayments, for example, so that a regulator does not need to do that research each time a program is established in a single body of water, and I think the kind of work that the NSF is funding right now on Cape Cod is an example of that, but there needs to be an awful lot more.

It is very expensive and very time-consuming to figure out some of these systems in the first place, but I think once it has been done for a catalogue of the most important kinds of estuary systems, it will be possible for a single community like the town of Falmouth to implement a program that is defensible in the courts that will actually result in protecting the quality of some of these very important bodies of water.

Senator KERRY. Do you think the political will is there now, both in the public at large as well as in the leadership, to make this happen?

Mr. CARBONELL. I certainly see it on Cape Cod and I think I see it in Massachusetts to a large extent and I hope I am beginning to see it at NOAA. I am certainly very encouraged by some of the developments down here recently and Professor Knauss could be a tremendous asset as the head of that agency.

I am also encouraged a great deal by the cooperative attitude that I think I am seeing between EPA and NOAA. I think this is a new thing, to some extent, and I think EPA realizes that it needs to welcome NOAA into its water quality turf and that NOAA needs to welcome EPA into its coastal turf.

Certainly on Cape Cod we have had some good experiences with Federal agencies working together with us that perhaps have been exceptional in terms of the national experience, but I am hopeful we can see more of that.

Senator KERRY. I certainly am hopeful, too. I have spent time down on the Cape since I was a kid. My first memories are waddling around in the water on the Cape. It is an area that I know extremely well—at least the Falmouth/Woods Hole Islands area—and it is unique in many respects.

Everybody has pride in their state's assets and South Carolina has enormous assets, as well as Maryland. Yet the Cape, I think because of its sole source aquifer and its outlook on Massachusetts Bay, on Waquoit, Buzzards Bay, the Sound—Vineyard Sound, et cetera—plus the Atlantic Ocean has this extraordinary panoply of

bays and estuaries that are really, all of them, now being impacted by this enormous development that spews out into every single one of them. It is not one shoreline, it is many, many shorelines, and some reversing and coming around to affect each other.

Last year we tried a clean beach effort, and I think we need to enhance that while increasing people's awareness about plastics and other things. But I certainly think that the regional effort that you have made is a tremendous beginning, and we have got to build on last year's initiative and really come to grips with this question and strengthen the entire land use water use interaction.

I cannot think of a "laboratory" where it is more pronounced than it is in this particular one. So I think you have been asked to be here today precisely for that reason, and I think it is a great example of how people have seized the initiative on their own.

But clearly it is going to take, as you have said, NOAA's and EPA's cooperation, and it is going to take money from the Federal level. It is going to take a tremendous amount of effort.

Particularly, I was impressed with your scientific data request. I think that is very, very important so that we know what we are doing here and what our priorities ought to be in terms of where you are going to put the money first in order to maximize your impact and so forth.

Dr. Beam, likewise, down in South Carolina, I think it is probably no accident that the Chairman of the full Committee is your chairman also and your senator. What can you share with us about the working relationship between the coastal counsel and the South Carolina Water Quality Agency that might be enlightening in terms of the relationships we are trying to spread elsewhere?

Dr. BEAM. I think our relationship has gotten better over the last 12 or 15 years we have been in operation. Water Quality people in every state are not enamored by the thought of other people looking over their shoulder and second-guessing the water quality determinations they make, especially under the section 401 water quality program.

However, that is why I suggested a sec. 312 type review—and I would say I think the openness of our program because of the section 312 review has made water quality programs in South Carolina, made citizens more aware that they can get into those programs and having something to say about those decisions.

That is why I think the 312 review of the water quality programs would be very appropriate. We are talking about important decisions concerning water quality that are made. I think if the public can be made aware of the issues, be provided the scientific information, then they can embarrass officials into making proper decisions.

I said in my testimony that HUD is not the only place that is receptive to political maneuvering and I think to be honest the closer you get to the local government level the more pronounced that may be so I would say that it is imperative that the public, especially the environmentally-aware public—and I will say that population is growing drastically from the accounts that you alluded to earlier—if we can get these people aware of these things, then I think they will put enough pressure and establish a political

will in the communities and the states to make sure that those kinds of decisions are made properly.

Senator KERRY. Does the Coastal Council now take into account water quality concerns when they issue permits?

Dr. BEAM. Yes, and we would not issue a permit unless we have a section 401 certification from the Water Quality Agency.

Senator KERRY. The bill that I am proposing would basically double the funding for coastal zone management from $35 to $70 million, and it is going to be tough, given the current fiscal climate, but if we could do that, is that adequate? Is that enough?

Dr. BEAM. Well, I am reluctant to say what is adequate. But clearly, as this gentleman has said, it is such an area that is starving for funds, it would certainly be a good initial step and I would certainly welcome the opportunity to share in that and work with our Water Quality Agency. I believe we could do that, to address an issue which they tell us is the most pressing issue and that is the nonpoint source problem coming from land usage.

Dr. TAYLOR. I am going to agree with the two gentlemen before me, because I would say exactly the same thing. I would also say that the Critical Area Commission has as one of its members that department in the state which handles water quality issues.

When we discovered the deficiencies early on in the state, we found out that we had to go above and beyond that which existed in the state with respect to storm water runoff and with respect to sediment. That agency worked with the Commission and went along with the regulations established that created more stringent criteria for the critical areas such as 10% improvement in storm water runoff, the use of vegetable buffers of varying degrees. So there is that cooperation in Maryland.

Senator KERRY. Dr. Beam, what is the South Carolina policy on the no net loss of wetlands?

Dr. BEAM. We consider the coastal zone of our state, which is eight counties, to be quite unique and different from the other 38 counties. We did not certify Nation-wide permit 26 in the coastal counties, therefore there is an individual permit required, even in isolated fresh water wetlands.

We require one-to-one mitigation, sometimes two-to-one mitigation, but we require one to one mitigation for even isolated vegetative wetlands. We have gone far beyond what anybody else probably has tried to accomplish.

Senator KERRY. What about the critical?

Dr. TAYLOR. Critical area? Two-to-one mitigation, yes.

Senator KERRY. In my bill, I proposed as you know that each state develop a plan, and that plan would integrate the water quality land use portions thereof; Then you get an additional grant of Federal money.

Another way to attack the plan might be through a competitive grant program, where states show that they have got an ability to come after it, and they get it. In Maryland is there a methodology that works best, or is the current process adequate and probably the best from your perspective?

Dr. TAYLOR. I would say first of all Maryland's program is straight across the board. Any grants that go to the local jurisdictions are not competitive. They are, right now, basic sums of money

that allow them to implement their program. We are moving into competitive grant, because there are elements in each county and town's program where they would like to place additional funds.

Senator KERRY. So you think a mix is effective?

Dr. TAYLOR. Yes, I do.

Senator KERRY. There should be the basic approach and then the possibility for something more, which is another kind of incentive?

Dr. TAYLOR. Yes.

Senator KERRY. Combined incentives?

Dr. TAYLOR. Now, the percentage mix, I do not know. That is anyone's best analysis and assessment. But I think that both are necessary, because there are demands placed at the local level that are above and beyond what they can carry out with their existing staffs and capabilities.

Senator KERRY. Dr. Taylor, among your recommendations on this bill you said that you thought we ought to try to find ways to identify effective approaches to resource management. In the bill, we call for an environmental monitoring program specifically to look at those strategies. Is that what you had in mind? Is that adequate, or is it something different that you were talking about?

Dr. TAYLOR. No, it is not different at all.

Senator KERRY. So you think that is a useful way?

Dr. TAYLOR. Yes, I do. We are also instituting a geographic information system as well, to in essence show what changes have occurred on the land and what effect that has had on the quality water.

Senator KERRY. How would you characterize the working relationship between the Commission and the Maryland State Water Quality Agency?

Dr. TAYLOR. It is a very good one. It is a solid one. We are finding that standards and regulations that the Water Quality Agencies had fostered before, are in need of change. We are working together to foster that change.

Senator KERRY. Anybody can answer this: is there a best way to institutionalize the capacity for their cooperative relationship, or is there always going to be a dependency on the personalities involved, in the sense of the will?

Dr. BEAM. I think the latter is probably what I would characterize as the appropriate answer. I think providing some funds, setting a goal that they would have to work together to accomplish, would best be my recommendation as to how to institute the program.

Senator KERRY. Before we wrap this up—you have all been very patient. I want to make sure that there is nothing unsaid that you feel you really want to say with respect to either the bill or the problem in general.

Before I adjourn the hearing, is there anything any of you would like to add with respect to comments of another, or something that has not been asked?

[No response.]

Senator KERRY. I want to thank you again. Thank you very much for your patience. Thank you for your presentations. Thank you for the excellent models which you have each labored through, I know, with enormous difficulty at times, to set an example for us.

I would like to ask that—and I know the answer is yes, but I want to say on the record, I know you will continue to be available to us and to help us fashion this and to be helpful with the other agencies and management programs through the country in order to try to mobilize a good coalition to make this happen as soon as we can.

I think it can be very productive, and I think it can be a great addition to the efforts of Senator Hollings and Senator Magnuson and others who have come before us on this important program.

I thank you all for joining us today.

We stand adjourned.

[Whereupon, at 12:55 p.m. the Committee adjourned.]

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